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**SUPPLEMENT**

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# **EVALUATION OF EVIDENCE ON SOVIET GUIDED MISSILE PRODUCTION**


**A Continuing Report of the Production Working Group  
of the  
Guided Missiles and Astronautics Intelligence Committee**

**October 1963**

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## INTRODUCTION

This report is a photographic supplement to the Continuing Report of the Production Working Group of the Guided Missiles and Astronautics Intelligence Committee (GMAIC).<sup>\*</sup> It is designed to present the physical information on the key facilities engaged in some way with the Soviet missile production program. While the emphasis in this first edition of the supplement is on ballistic missile production, the format of the report allows for expansion as information becomes available, and future revisions of this supplement will contain photographic evidence on production facilities engaged in other offensive and defensive missile systems.

This supplement is limited to photographic evidence on airframe and engine producers on the assumption that, within the KEYHOLE photography to date, these are the only meaningful targets for review. As scale increases and photographic resolution improves, a better appreciation of the production of ground support equipment may be reflected in KEYHOLE photography and, in that case, evidence on the relevant facilities will be introduced.

Although the mission of the Production Working Group restricts its review to the Soviet program, this supplement contains a section on the Chinese rocket test stands at Peiping. The purpose for this is twofold: 1) these stands were undoubtedly designed by the Soviets, and analysis of the layout and construction of the facilities is therefore useful in analyzing Soviet test facilities, and 2) available large-scale photography of the Chinese test stands should allow refinement in judgments on the Soviet stands as noted in KEYHOLE material.

The format of this document is designed to present the missile-related facilities in several Soviet cities, provide the best photograph of each, and oppose this photograph with a line drawing which provides key measure-

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<sup>\*</sup>GMAIC. SC-04818/61, Evaluation of Evidence on Soviet Guided Missile Production, CIA/RR ER SC 61-5, 21 April 1961 (TOP SECRET)

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ments within the facility. Pagination has been devised to follow this purpose and to allow for subsequent expansion. Basically, the pagination is alphabetically by city. Each chapter on a city is broken into numbered sections on the facilities within the city, beginning with a Section 0. For example, Kuybyshev has three facilities of missile interest covered in this supplement; therefore, the material related to Kuybyshev is broken into sections as follows:

	<u>Section</u>	
Kuybyshev	0	Information on the city
	1	Information of Plants 1 & 18
	2	Information on Plant 24
	3	Information on test facility at Kurumoch

Within each section, the section number precedes each page number (e.g. 0-1, 0-2, 0-3, etc).

Revisions of this supplement will follow as required by new photographic material or analysis of other information.

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## DNEPROPETROVSK

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City of Dnepropetrovsk	0	
DMDPC, Plants Post Boxes 186, 192, and 203	1	
48-26N 34-59E; <input type="text"/>		25X1
DMDPC Test Facility	2	
48-26N 34-59E; <input type="text"/>		25X1

Dnepropetrovsk 0-1

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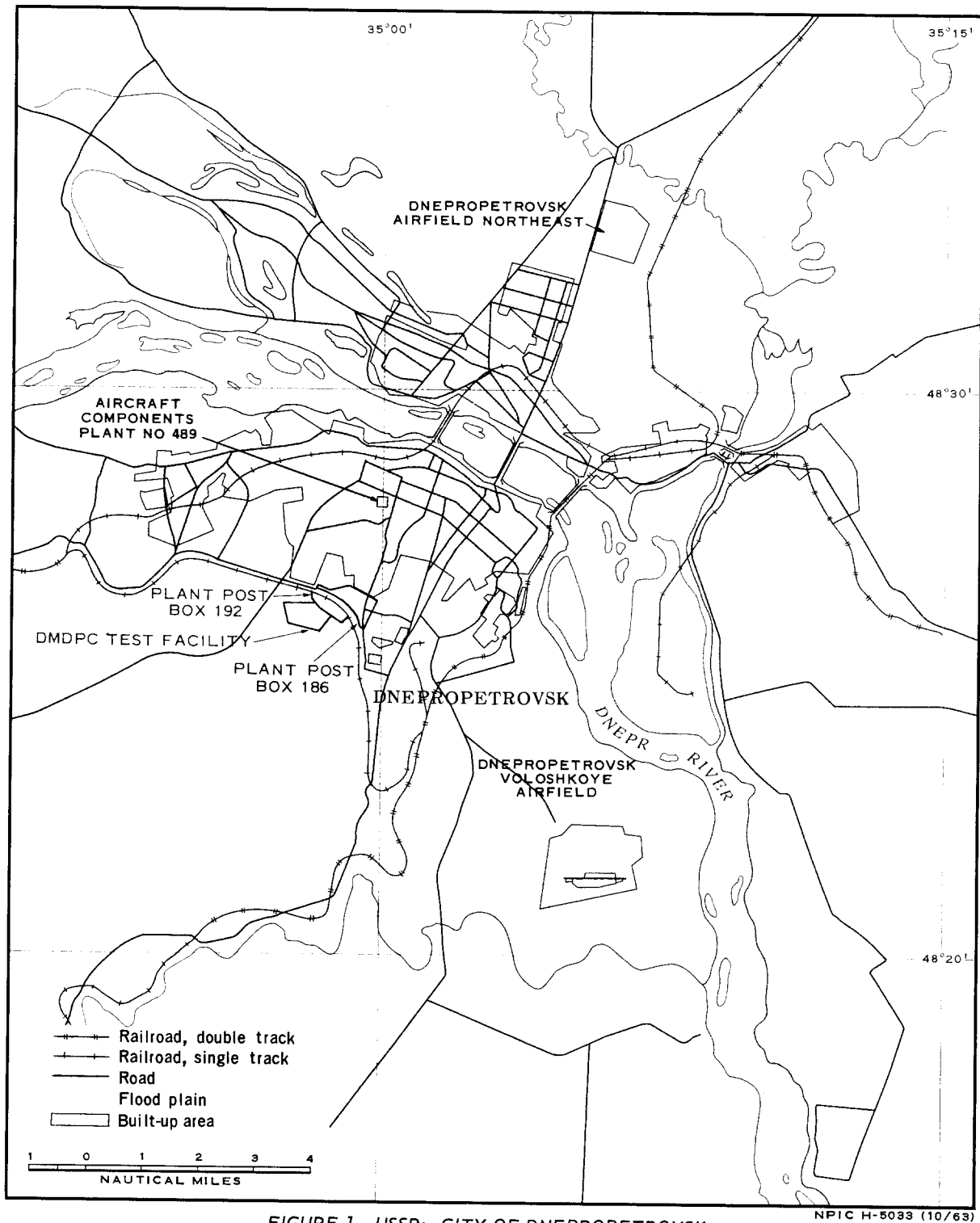


FIGURE 1. USSR: CITY OF DNEPROPETROVSK.

NPIC H-5033 (10/63)

Dnepropetrovsk 0-2

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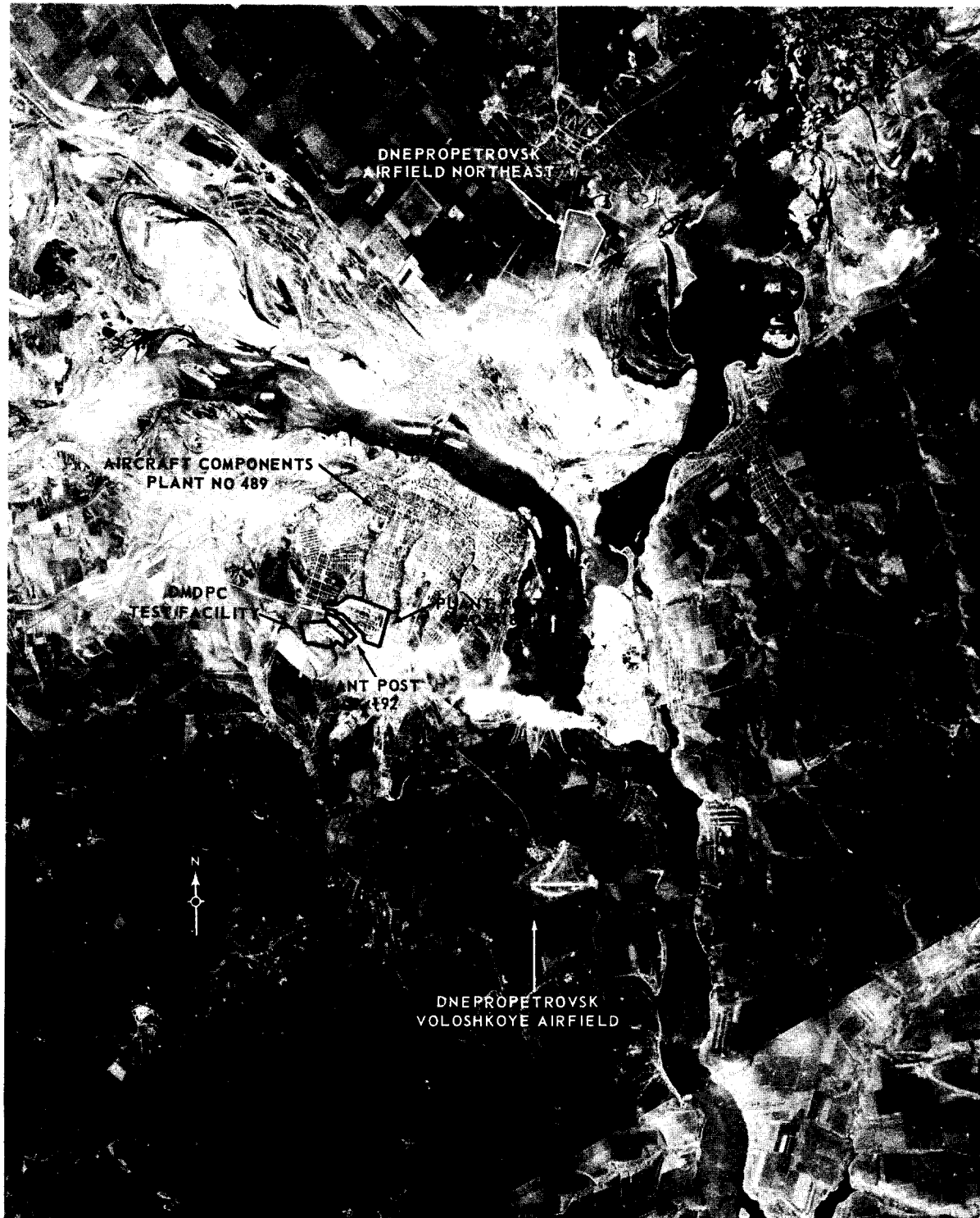


FIGURE 2. USSR: CITY OF DNEPROPETROVSK

MAP H-5034 (10/63)

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Dnepropetrovsk 0-3

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**DNEPROPETROVSK MISSILE DEVELOPMENT  
AND PRODUCTION CENTER (DMDPC),  
PLANTS POST BOXES 186, 192, AND 203\***

**PHOTOGRAPHIC CHRONOLOGY**

German photography of Dnepropetrovsk in 1944 showed a plant under construction in the area now identified as the Dnepropetrovsk Missile Development and Production Center (DMDPC). Subsequent to the 1944 photography the plant was viewed on far-oblique photography in 1959 and at that time only Plant Post Box 186 was visible. The plant was operational at that time. Poor-quality vertical TALENT photography of [ ] showed the same site, but cloud and haze precluded photo interpretation. The first KEYHOLE photography of the site in [ ] showed Plant Post Box 186, Plant Post Box 192, and an associated test area. Between that coverage and the most recent coverage, [ ] no identified changes have taken place with the exception of earth scarring visible in the area of Plant Post Box 192 during 1962, indicating possible construction in the northern portion of the plant.

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**EVALUATION**

The Dnepropetrovsk Missile Development and Production Center (DMDPC), consisting of organizations using Post Box No 186, 192, and 203, is believed to be developing and manufacturing rocket engines and surface-to-surface ballistic missiles. Through 1960 the DMDPC had produced the Series 51 (SS-3, 700-nautical mile--nm) and Series 63 (SS-4, 1,000-nm) missiles and probably has produced the Series 61

\*Post Box 203, mentioned in the text, is unlocated but known to be in Postal/Telegraphic Zone 8, the same zone used by Plants Post Boxes 186 and 192.

Dnepropetrovsk 1-1

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(SS-1B, 150-nm) missile. In addition, the DMDPC has been involved in the development of the Series 63 and Series 61 missile systems. Since 1960 the DMDPC has been directly involved in the development of the second-generation Category B ICBM (SS-7) and probably has been involved in some way with the Series 65 (SS-5, 2,000-nm) missile. It now appears probable that the DMDPC produced both the Series 65 and Category B ICBM. Some of these missile systems or subsystems may have since been phased into other facilities.

In addition, it is believed that the DMDPC exercises considerable control over a number of other production facilities and that an element of the complex, Post Box No 203, is a missile design authority, the scope of activity of which is undetermined at present.

In addition to military production, the facilities that constitute the DMDPC also are known to be producing refrigerators, some type of electrical equipment, and Belarus tractors.

Photography of the entire installation reveals more than 6,500,000 square feet of roof cover, of which at least 5,000,000 square feet is estimated to be involved in the above military programs. Photographic interpretation cannot determine areas of missile final assembly at this facility.

The high-bay building (Building No 18) in Plant Post Box 186 is considered to be for hydrostatic test or checkout of missile tankage or stages, which could relate to both the missile production and development roles at the DMDPC. Spanish sources have reported engine testing in the western part of the Plant 186 area before 1956. Test stands are not observable in this area.

For evaluation of the DMDPC Test Facility, see Dnepropetrovsk, section 2, page 1.

Dnepropetrovsk 1-1 (Continued)

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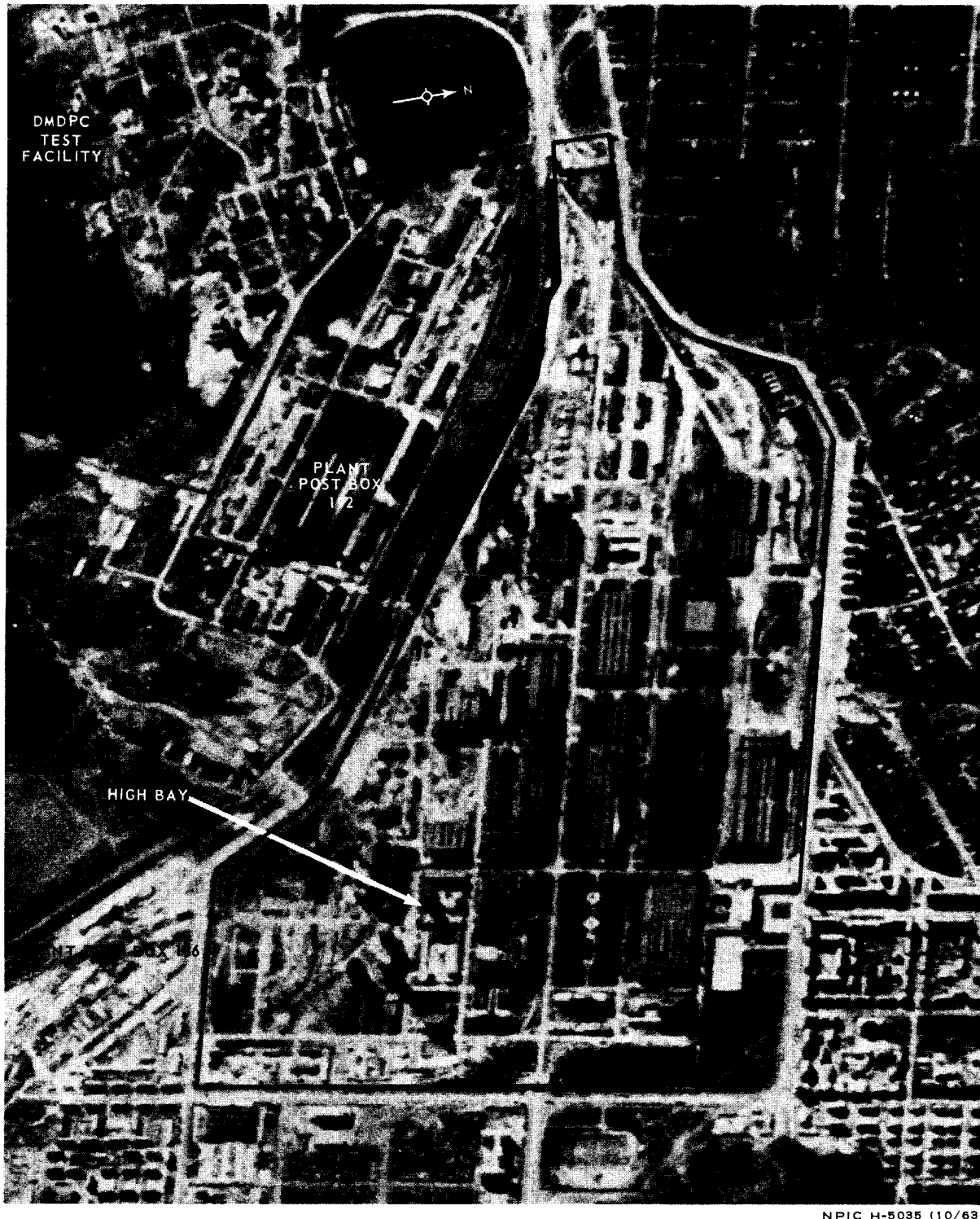


FIGURE 1. USSR: PLANT POST BOX 186 AT DMDPC, DNEPROPETROVSK

NPIC H-5035 (10/63)

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Dnepropetrovsk 1-2

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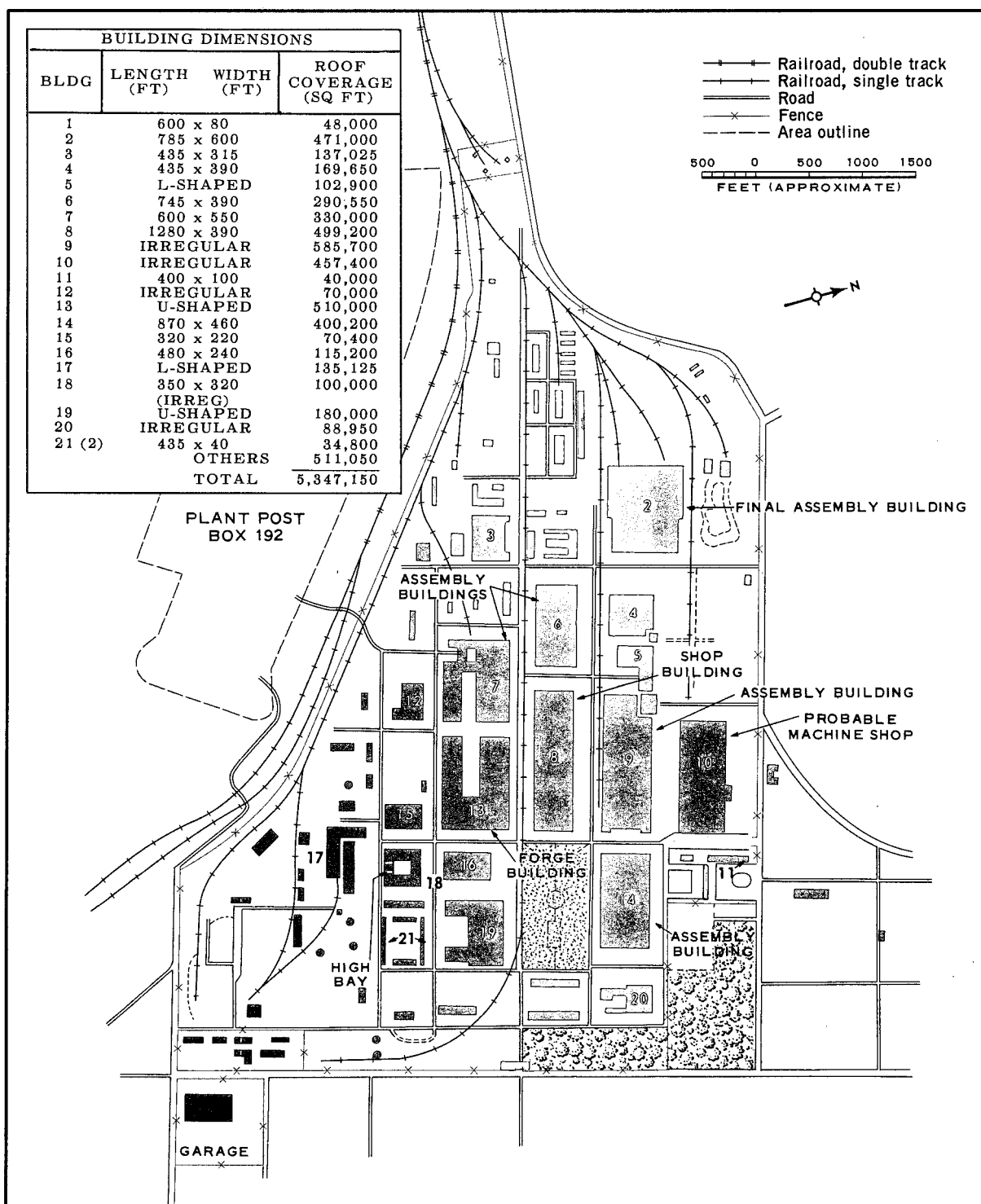


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF PLANT POST BOX 186 AT DMDPC, DNEPROPETROVSK.

NPIC H-5036 (10/63)

Dnepropetrovsk 1-3

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FIGURE 3. USSR: PLANT POST BOX 192 AT DMDPC, DNEPROPETROVSK

NPIC H-5037 (10/63)

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Dnepropetrovsk 1-4

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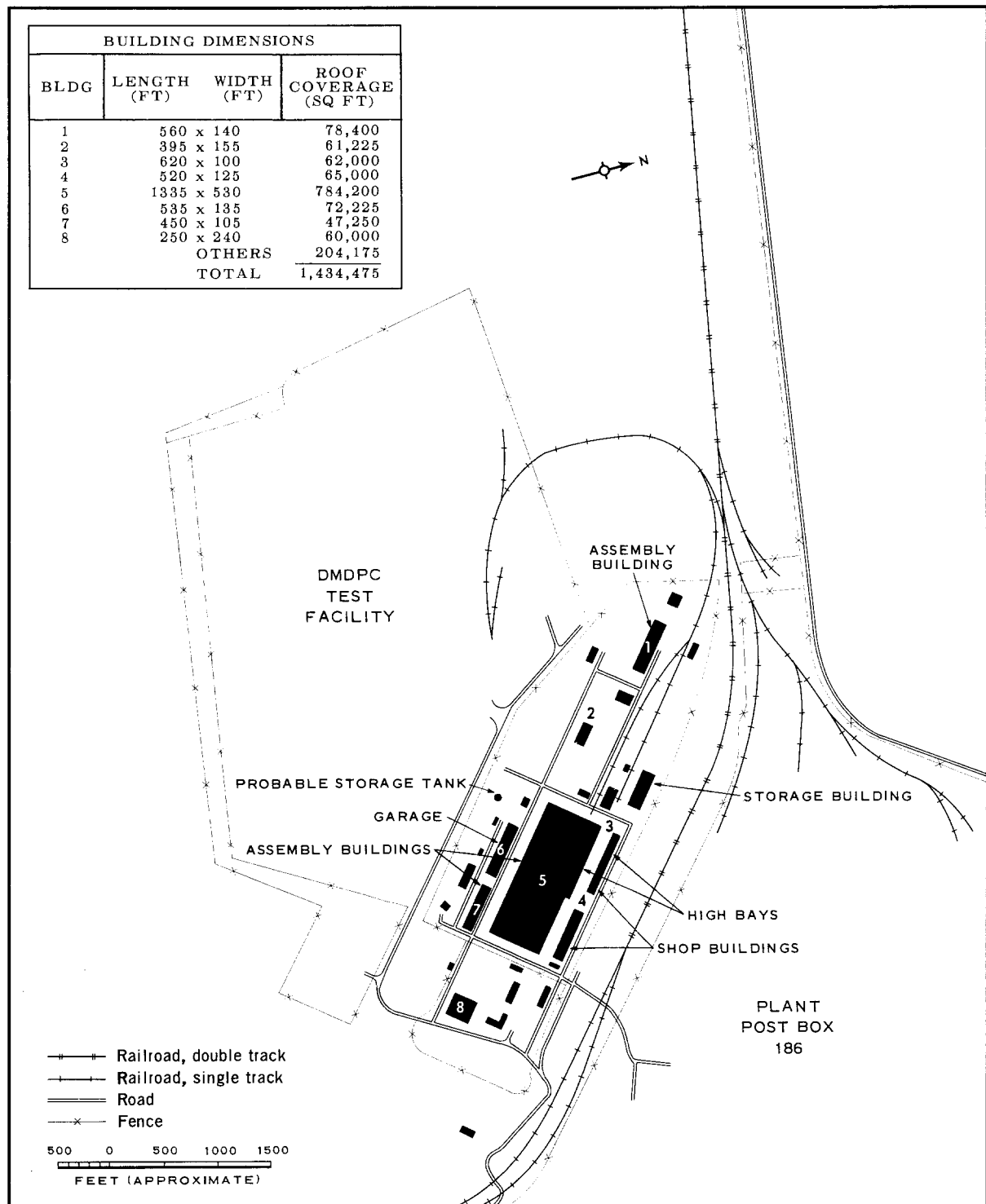


FIGURE 4. USSR: LAYOUT AND ROOF COVERAGE OF PLANT POST BOX 192 AT DMDPC, DNEPROPETROVSK.

NPIC H-5038 (10/63)

Dnepropetrovsk 1-5

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**DNEPROPETROVSK: DMDPC TEST FACILITY****PHOTOGRAPHIC CHRONOLOGY**

The DMDPC Test Facility was first viewed on KEYHOLE photography of [ ] It has been observed on more recent photography of poorer quality through 1962 and no significant changes were apparent.

25X1

**EVALUATION**

The presence of a test area associated with the DMDPC, first [ ] is confirmed by the KEYHOLE photography. Three vertical test stands (Items 1, 2, and 3) are discernible and deemed operational. Two of these (probably Items 2 and 3) were not previously reported in collateral information. Photographic resolution precludes distinction between engine and missile testing at this facility. Rail service is available from this area to both Plant Post Box 186 and Plant Post Box 192. (See Missile Development and Production Center under Dnepropetrovsk, section 1, page 1.)

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Dnepropetrovsk 2-1

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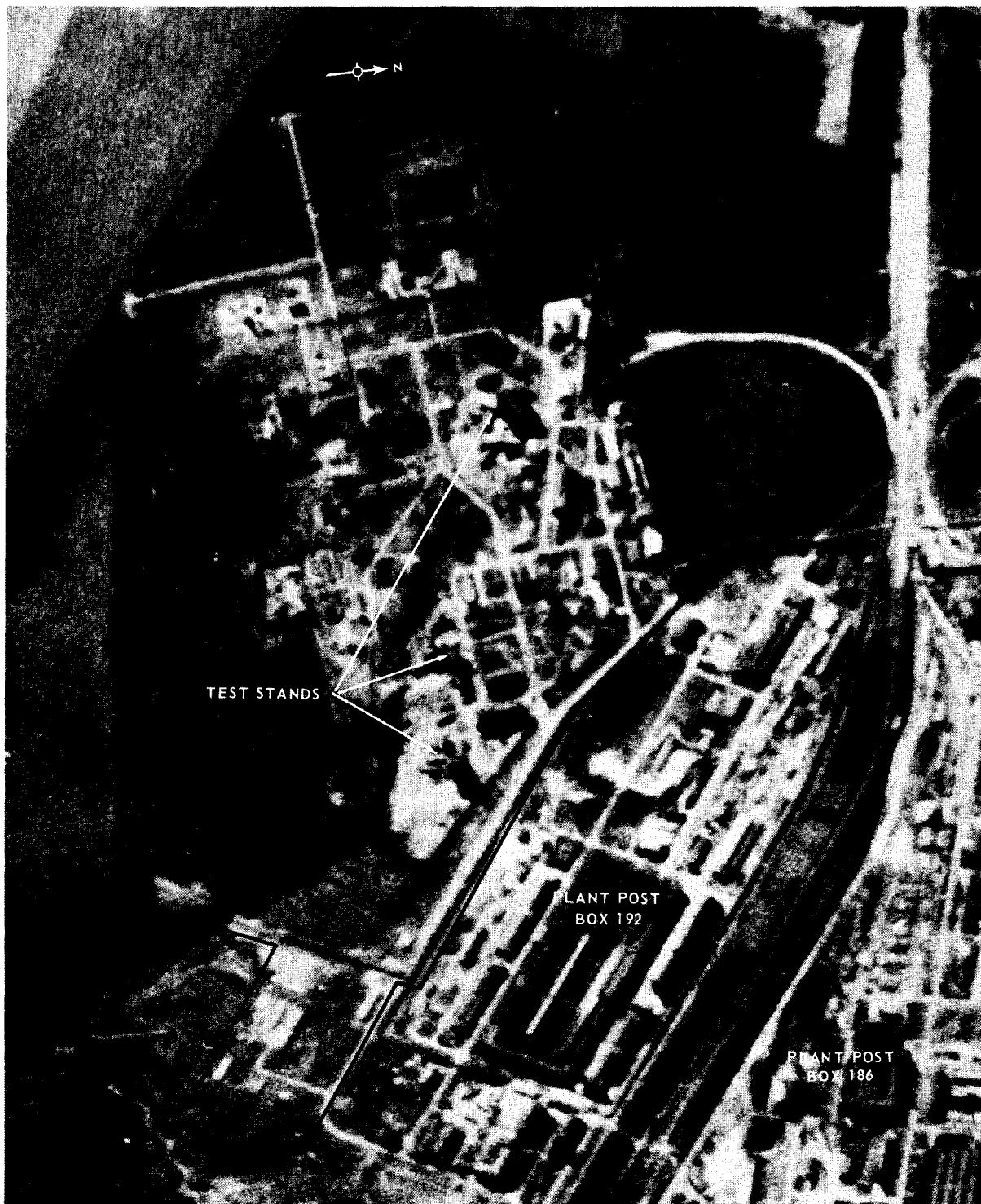


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NPIC H-5039 (10/63)

FIGURE 1. USSR: DMDPC TEST FACILITY AT DNEPROPETROVSK

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Dnepropetrovsk 2-2

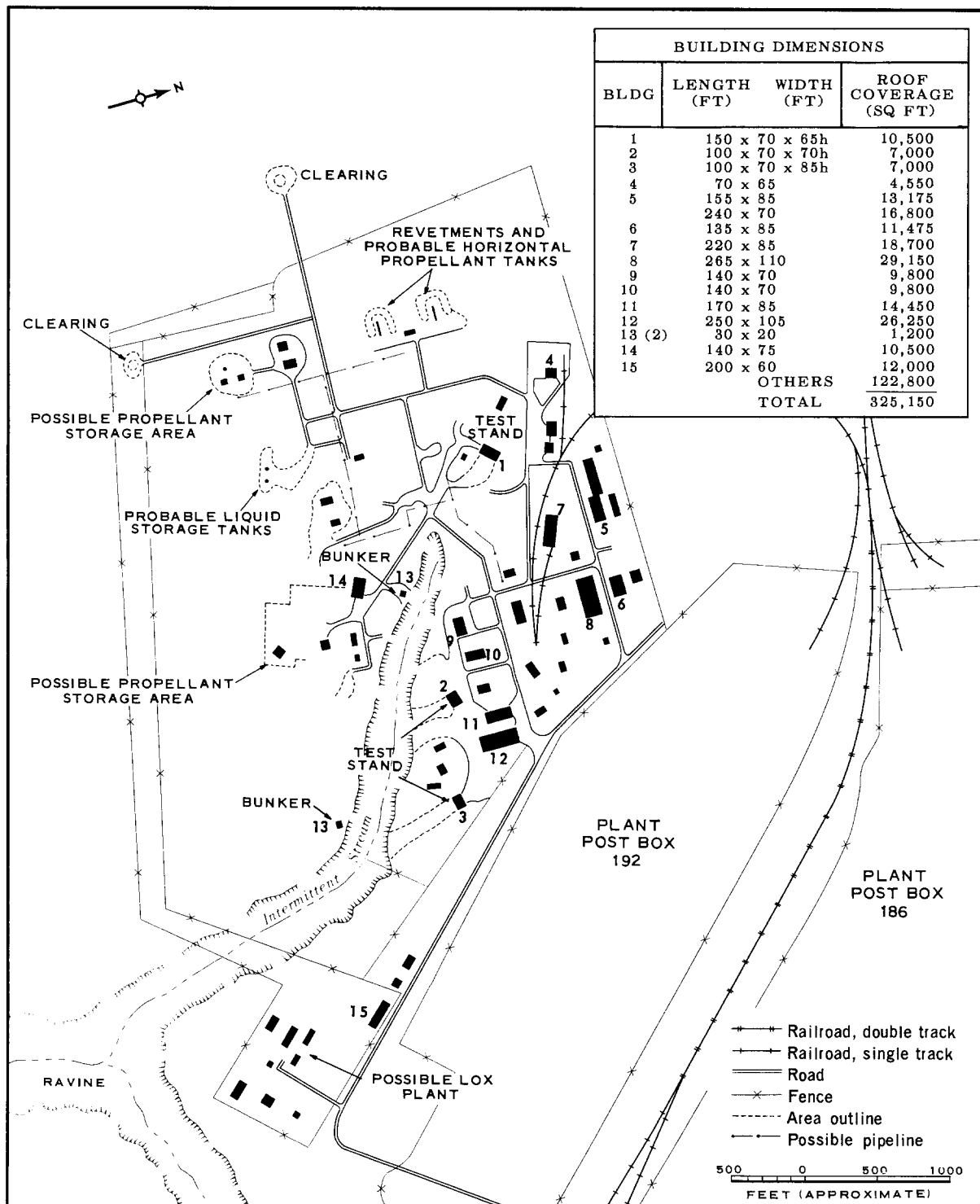
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NPIC H-5040 (10/63)

FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF DMDPC TEST FACILITY AT DNEPROPETROVSK.

Dnepropetrovsk 2-3

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## IVANKOVO

### Section

City of Ivankovo

0

Ivankovo Aircraft Plant

1

56-45N 37-07E;

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Ivankovo 0-1

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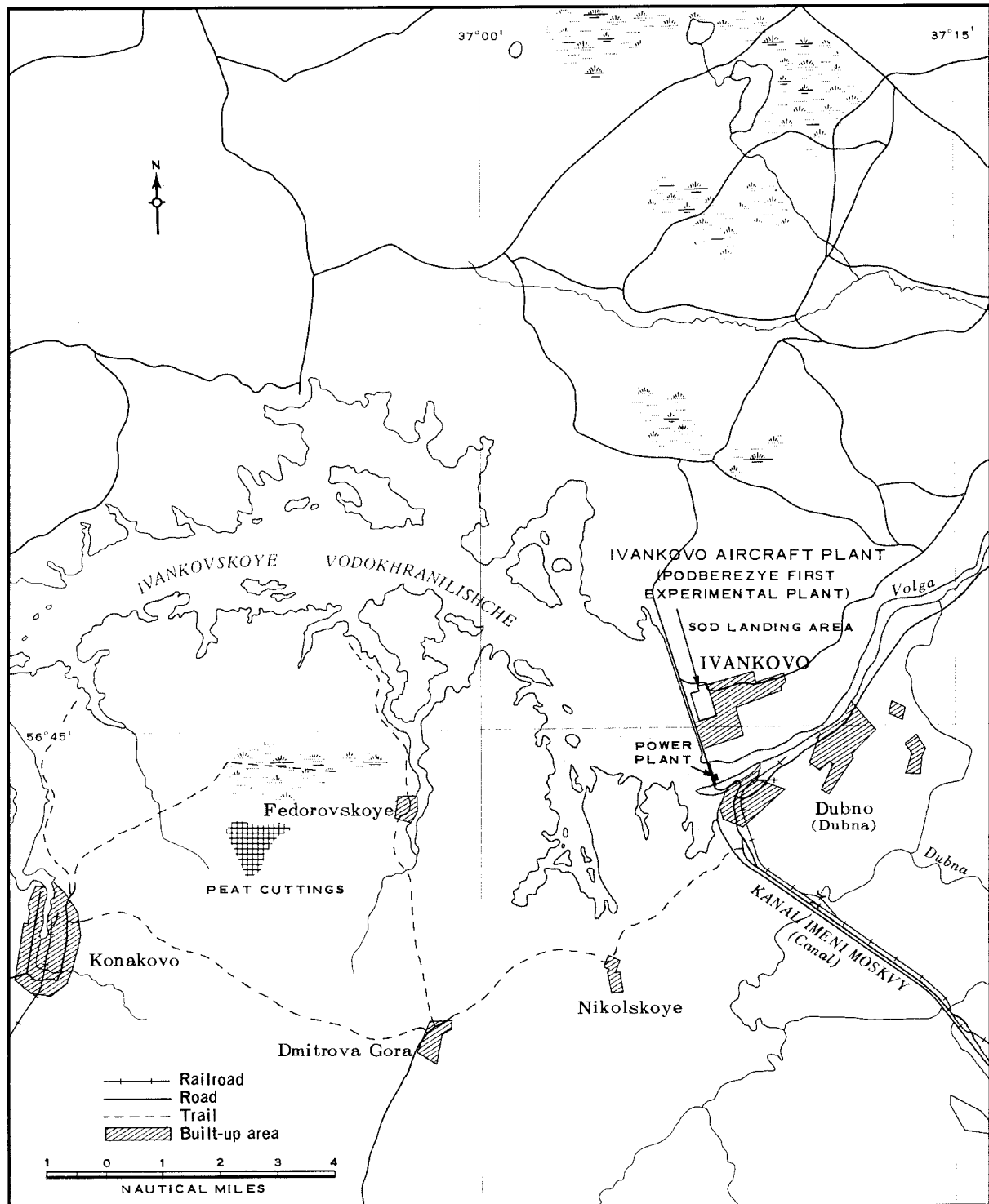


FIGURE 1. USSR: CITY OF IVANKOVO.

NPIC H-5045 (10/63)

Ivankovo 0-2

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FIGURE 2. USSR: CITY OF IVANKOVO

NPIC H-5046 (10/63)

25X1

Ivankovo 0-3

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**IVANKOVO: AIRCRAFT PLANT**  
**(PODBEREZYE: FIRST EXPERIMENTAL PLANT)**

**PHOTOGRAPHIC CHRONOLOGY**

The Ivankovo Aircraft Plant has appeared on captured German photography of 1941 and 1942 and on KEYHOLE photography of [REDACTED]

25X1

[REDACTED] As shown on the accompanying line drawing (Figure 2), a number of buildings have been added since World War II. In 1962 new construction was observed in the southern portion of the plant.

25X1

**EVALUATION**

The Ivankovo Aircraft Plant is believed to have begun series production of the CRACKER/KENNEL air-to-surface missile (ASM) in 1953.

25X1

Photography neither confirms nor denies missile activity.

Ivankovo 1-1

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FIGURE 1. USSR: IVANKOVO AIRCRAFT PLANT (PODBEREZYE FIRST EXPERIMENTAL PLANT) NPIC H-5047 (10/63)

Ivankovo 1-2

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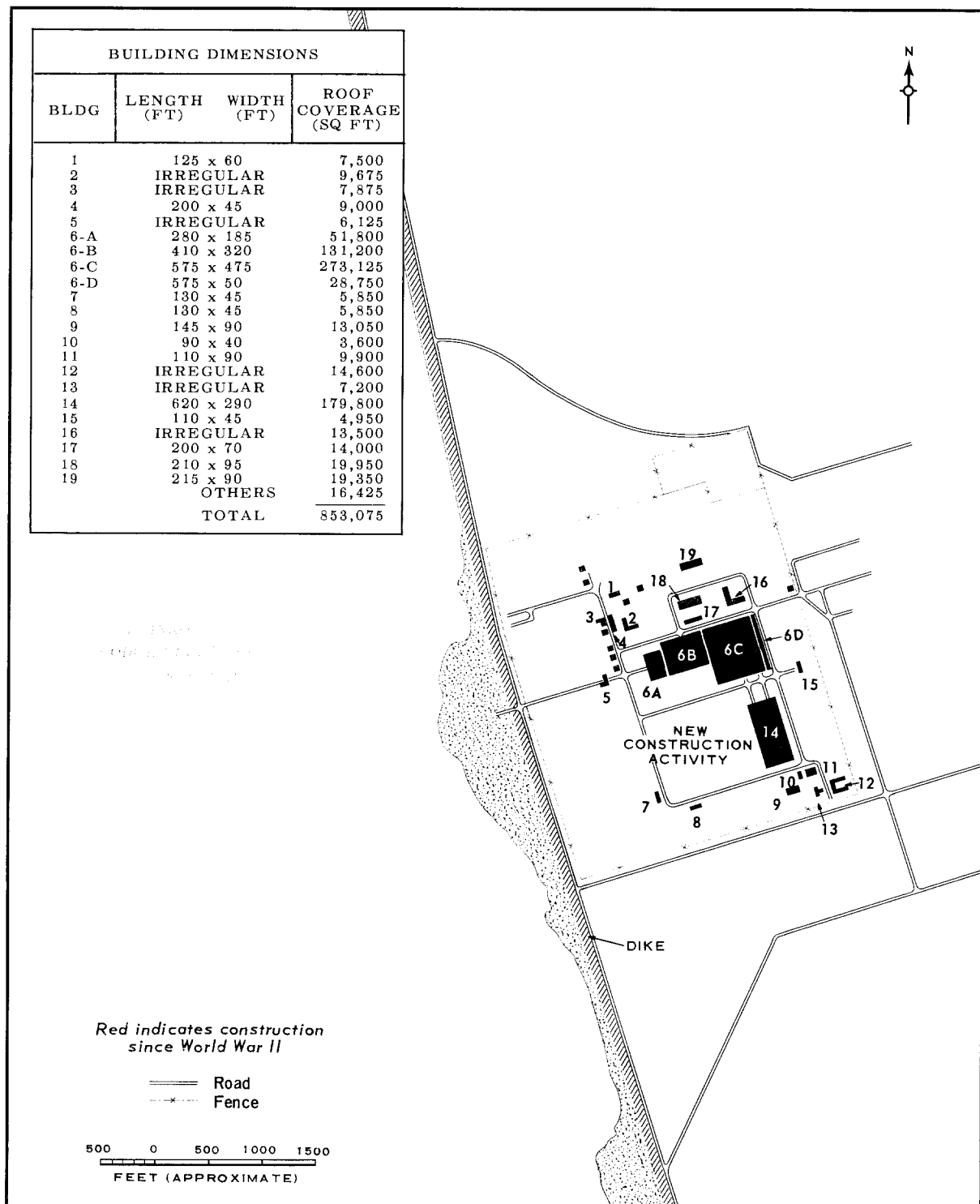


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF IVANKOVO AIRCRAFT PLANT (PODBEREZYE FIRST EXPERIMENTAL PLANT).

Ivankovo 1-3

TOP SECRET

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## KRASNOYARSK

	<u>Section</u>	
City of Krasnoyarsk	0	
Armaments Plant No 4 at Krasnoyarsk	1	
56-00N 92-59E; <input type="text"/>		25X1
Suspect Rocket Test Facility	2	
56-05N 93-27E; <input type="text"/>		25X1

Krasnoyarsk 0-1

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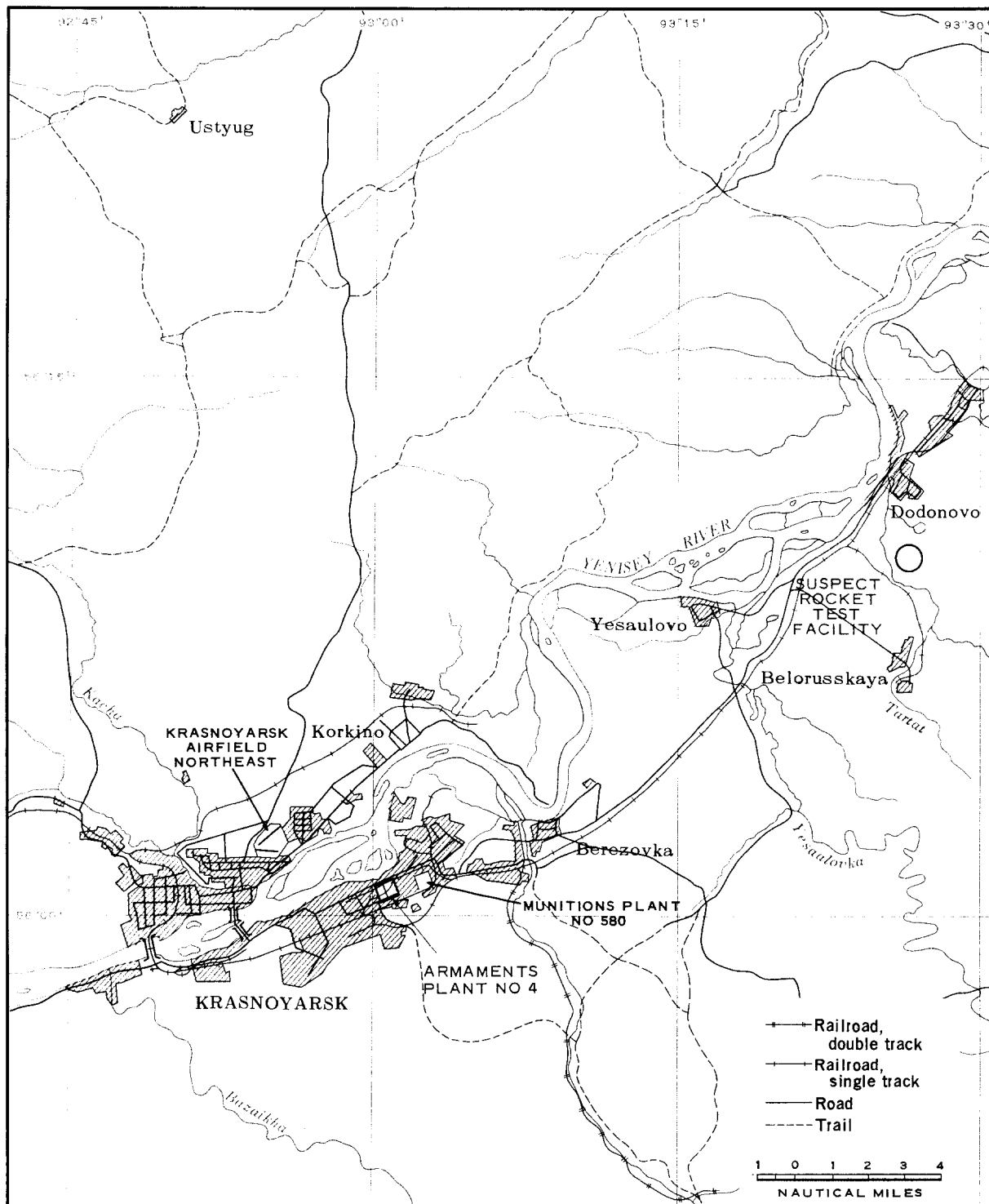


FIGURE 1. USSR: CITY OF KRASNOYARSK.

NPIC H-5137 (10/63)

Krasnoyarsk 0-2

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TOP SECRET

25X1

August 1963

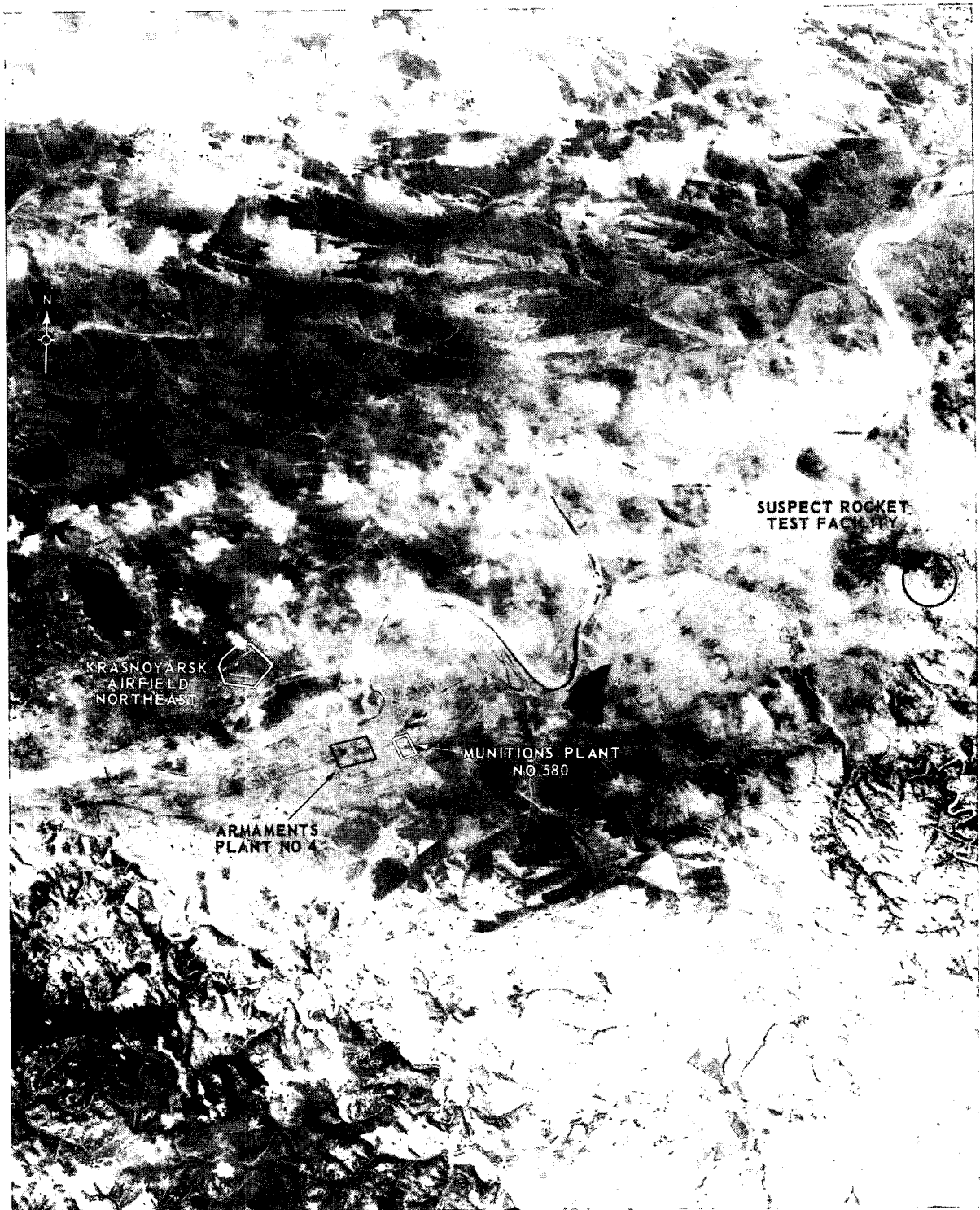


FIGURE 2. USSR: CITY OF KRASNOYARSK

NPIC H-5138 (10/63)

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Krasnoyarsk 0-3

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**KRASNOYARSK: ARMAMENTS PLANT NO 4****PHOTOGRAPHIC CHRONOLOGY**

This plant has been observed on a number of KEYHOLE missions since 1961. No changes in the plant have been observed since then except for the construction of a large fabrication and assembly building (Building No 2, Figure 2). When observed on photography from [REDACTED] this building was approximately half completed. It appeared completed on photography from [REDACTED]

25X1

25X1

**EVALUATION**

25X1

Plant expansion since 1960 (Building No 2) at this facility amounts to 800,000 square feet. This is considered a highly significant addition to plant capability. [REDACTED]

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25X1

expansion. However, photography neither confirms nor denies missile production. (See Suspect Rocket Test Facility under Krasnoyarsk, section 2, page 1.)

Krasnoyarsk 1-1

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NPIC H-5139 (10/63)

FIGURE 1. USSR: ARMAMENTS PLANT NO 4 AT KRASNOYARSK

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Krasnoyarsk 1-2

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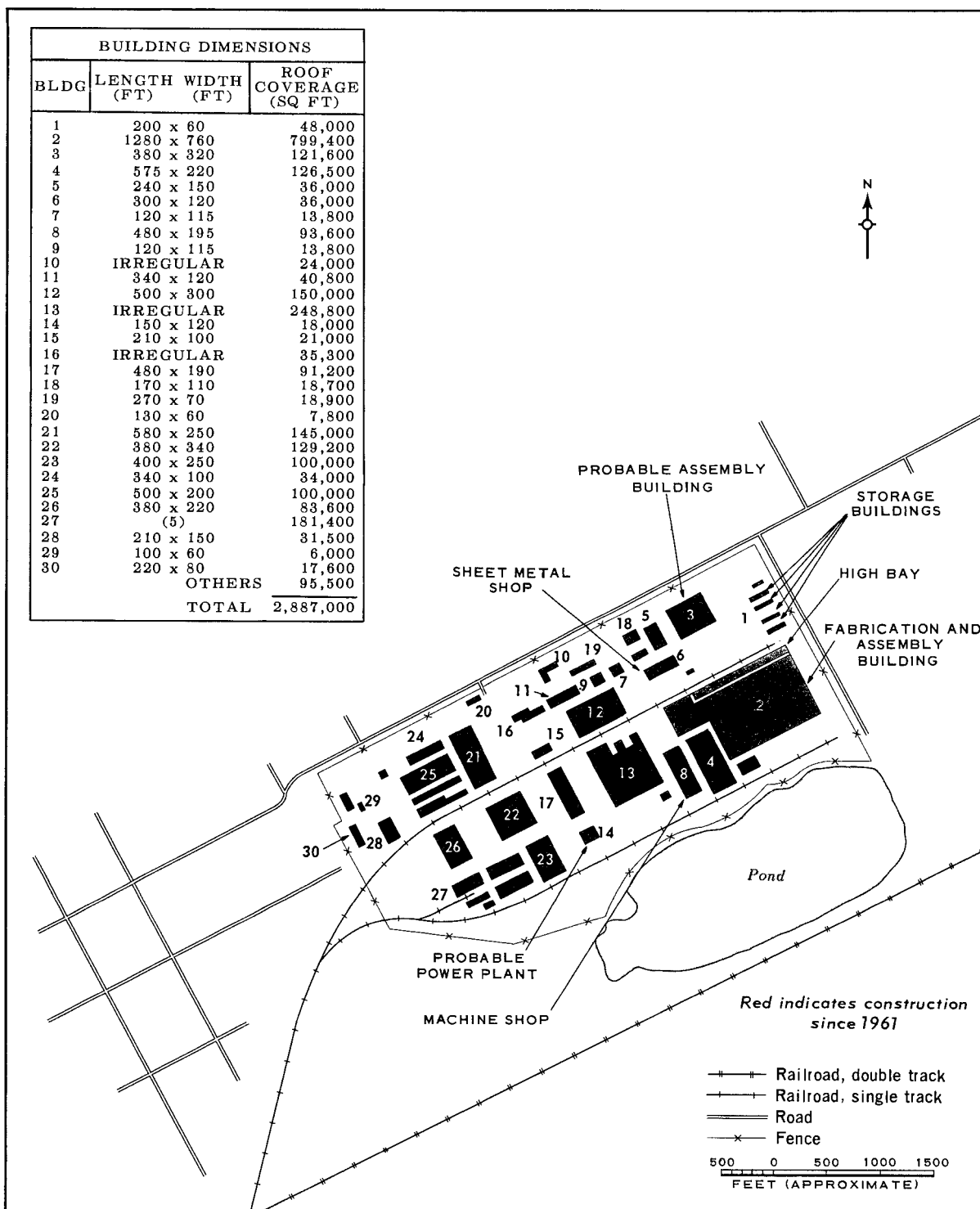


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF ARMAMENTS PLANT NO 4 AT KRASNOYARSK. NPIC H-5140 (10/63)

Krasnoyarsk 1-3

TOP SECRET

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**KRASNOYARSK: SUSPECT ROCKET TEST FACILITY****PHOTOGRAPHIC CHRONOLOGY**

GENETRIX photography showed no facility at this location in February 1956; however, some scarring was observed which may or may not have been directly related to construction of the facility. The test facility was first identified on [REDACTED] 25X1

but had been observed on poor-resolution photography of [REDACTED] The 25X1  
site is located 20 nm east-northeast of Krasnoyarsk on a wooded slope and is secured. It contains what may be a test stand which appeared to be operational when first identified. No basic changes in the original facility have been noted on photography through [REDACTED] 25X1

**EVALUATION**

Photography provides the only evidence of this facility and, accordingly, its operational date is unknown. Allowing a two-year construction period, the facility could not have been operational before 1958. Poor resolution of photography precludes distinction of missile- or engine-testing at this facility. This installation is rail served by a spur which appears to go directly to the possible test pad. (See Armaments Plant No 4 under Krasnoyarsk, section 1, page 1.)

Krasnoyarsk 2-1

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FIGURE 1. USSR: SUSPECT ROCKET TEST FACILITY NEAR KRASNOYARSK

Krasnoyarsk 2-2

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25X1



TOP SECRET

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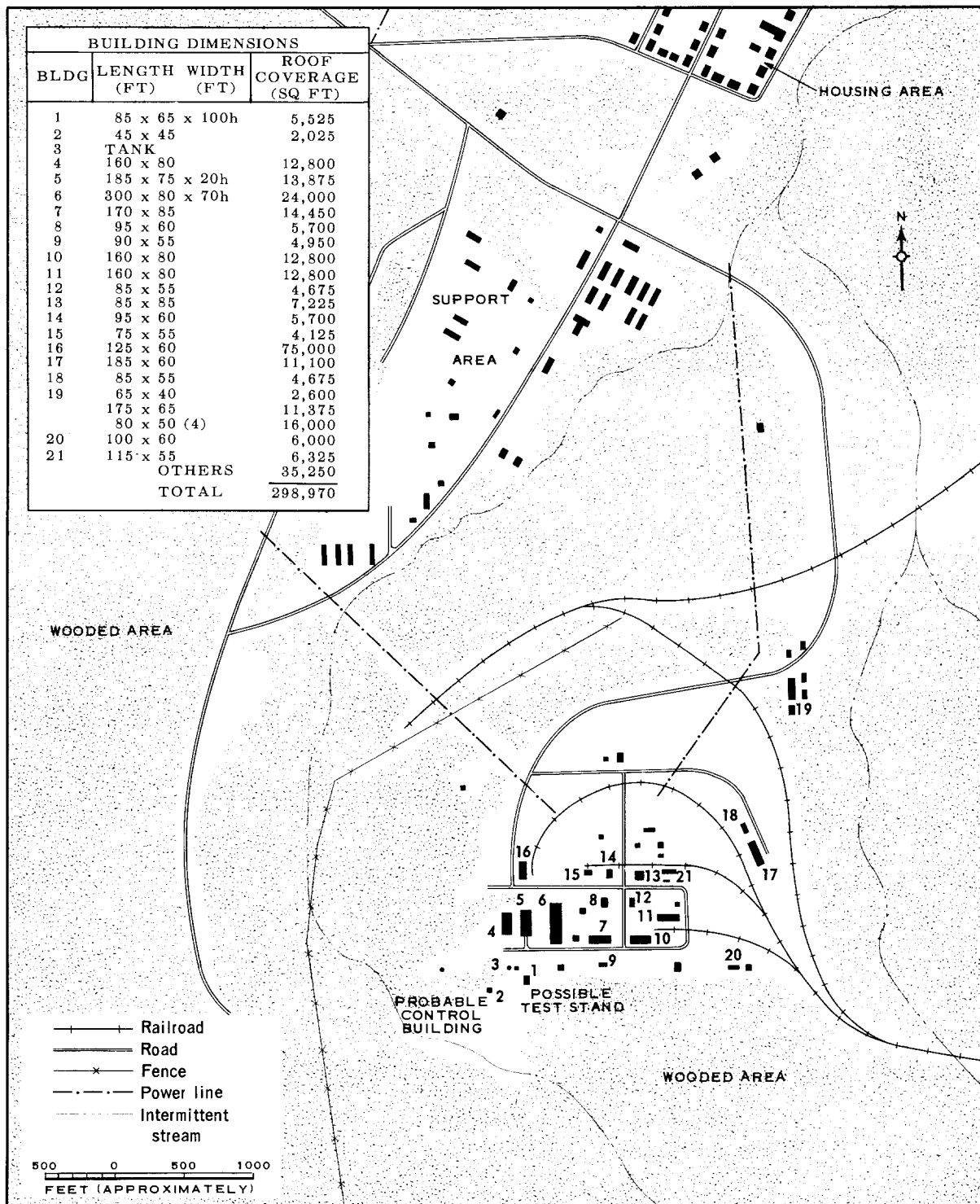


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF SUSPECT ROCKET TEST FACILITY NEAR KRASNOYARSK. NPIC H-5142 (10/63)

Krasnoyarsk 2-3

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## KUYBYSHEV

	<u>Section</u>	
City of Kuybyshev	0	
Airframe Plant No 1 and No 18	1	
(No 1) 53-13N 50-18E; [REDACTED]		25X1
(No 18) 53-12N 50-18E; [REDACTED]		
Aircraft Engine Plant No 24	2	
53-12N 50-17E; [REDACTED]		25X1
Rocket Test Facility at Kurumoch	3	
53-31N 49-49E; [REDACTED]		25X1

Kuybyshev 0-1

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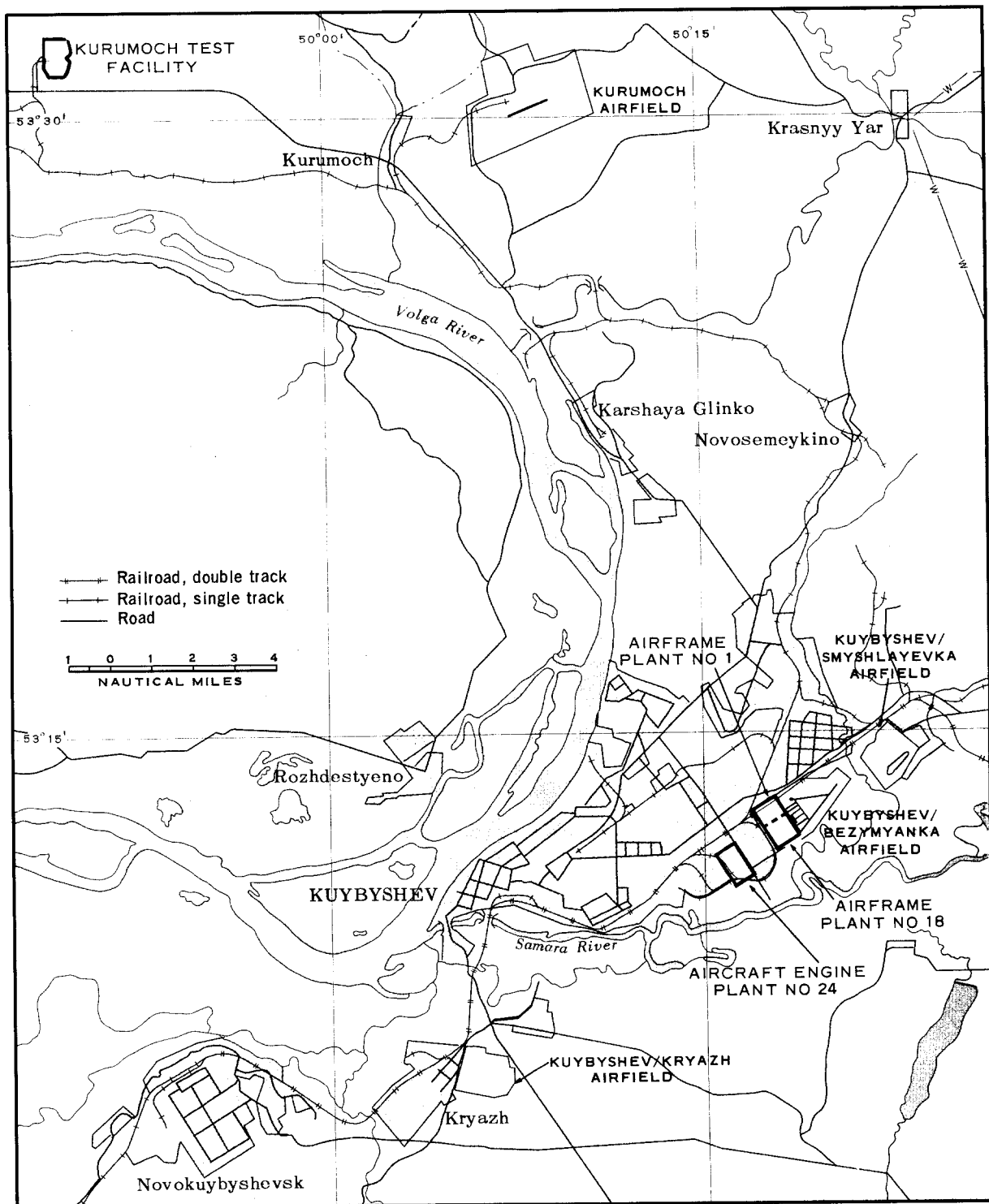
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NPIC H-5298 (10/63)

FIGURE 1. USSR: CITY OF KUYBYSHEV.

Kuybyshev 0-2

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FIGURE 2. USSR: CITY OF KUYBYSHEV

ALPH H-5299 (10/63)

25X1

Kuybyshev 0-3

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**KUYBYSHEV: AIRFRAME PLANTS NO 1 AND NO 18****PHOTOGRAPHIC CHRONOLOGY**

Photographic coverage of Airframe Plants No 1 and No 18 was obtained by the Germans in 1943, and extremely high-quality TALENT photography was obtained in [ ] Relatively low-quality photography has been obtained from KEYHOLE missions of 1961, 1962, and 1963. [ ] photography, however, is of higher quality than most of the KEYHOLE photography and permits detailed analysis of the plants as they existed in [ ] as compared with their status in [ ] During this period, two large assembly buildings and two smaller support buildings were completed in Plant No 1, adding approximately 295,000 sq ft to the plant roof coverage (Figure 2). Most of this construction had been under way in 1959. Plant No 18 showed less change with the addition of one shop and two administrative buildings, increasing the plant roof coverage by approximately 126,000 sq ft (Figure 2).

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25X1

25X1

**EVALUATION**

25X1

Photography neither confirms nor denies missile production at Plant No 1. At the time TALENT photography was obtained in 1959, production of BADGER aircraft was observed at Plant No 1. Aircraft count since [ ] indicates that there has been no apparent aircraft production at Plant No 1 during the period of KEYHOLE coverage. On occasion since

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Kuybyshev 1-1

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[ ] KEYHOLE photography has revealed the presence of a large unidentified aircraft on the ramp adjacent to Plants No 1 and No 18 (Figure 1).\* On photography of [ ], 12 rail cars were observed in the Plant No 1 area and three in the Plant No 18 area; each of these rail cars measured about 80 feet in length. The function of these rail cars cannot be determined from photography. Resolution of KEYHOLE photography precludes observation of transport vehicles at the present time.

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\*More recently, two probable aircraft of this type were seen on photography from Mission [ ]

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Kuybyshev 1-1 (Continued)

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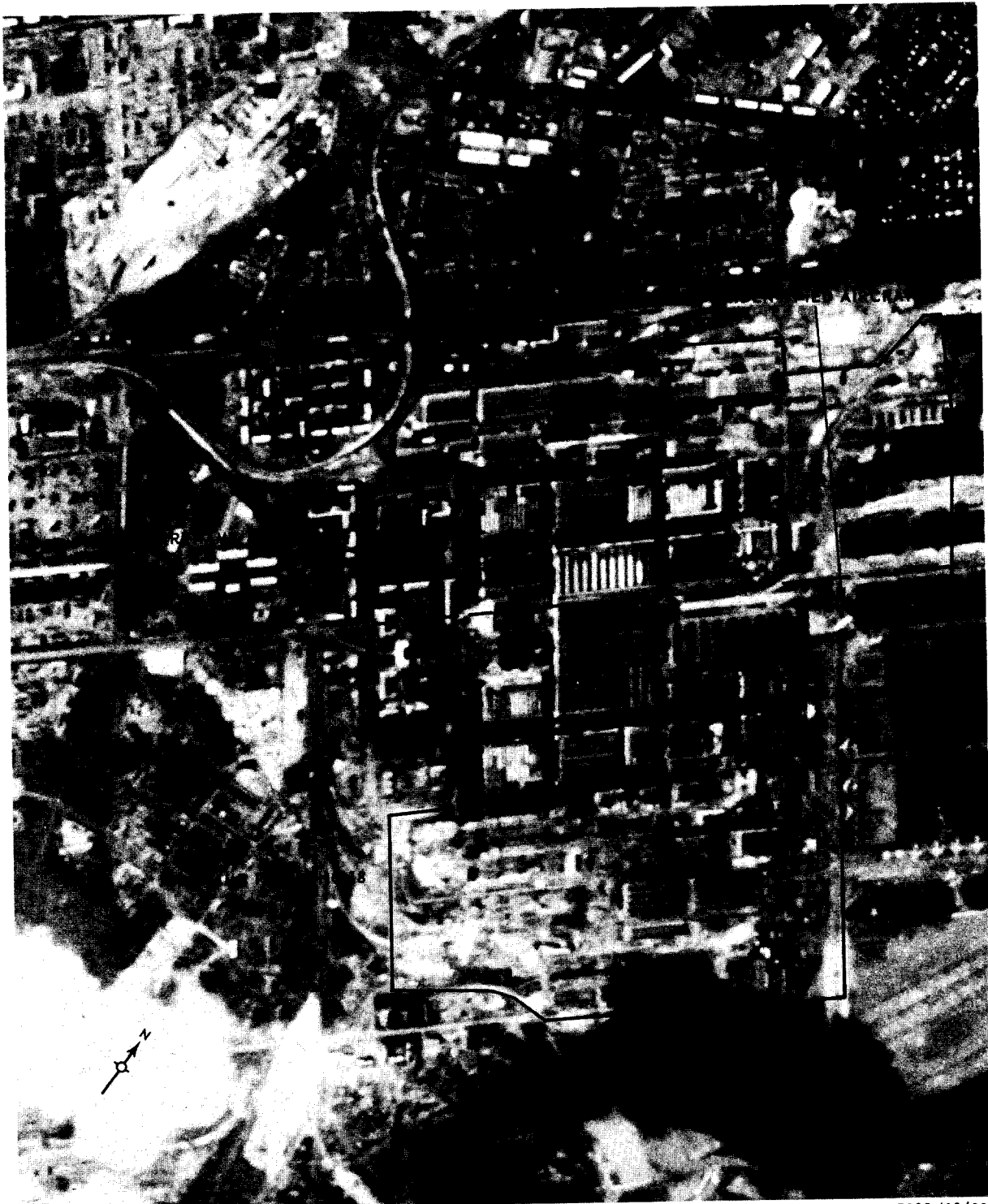


FIGURE 1. USSR: AIRFRAME PLANTS NO 1 AND NO 18 AT KUYBYSHEV

NPIC H-5300 (10/63)

Kuybyshev 1-2

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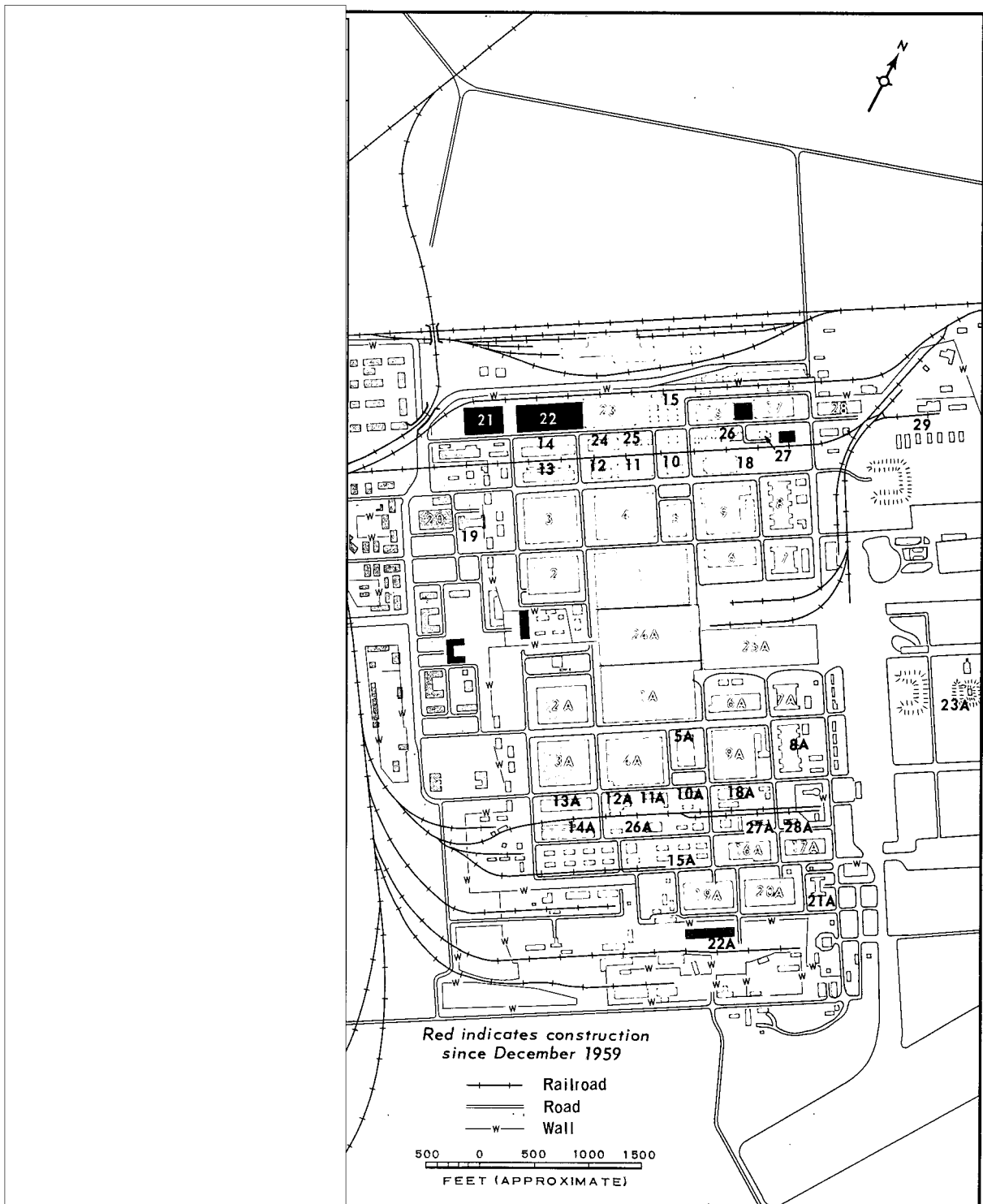


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF PLANTS NO 1 AND NO 18 AT KUYBYSHEV.

Kuybyshev 1-3

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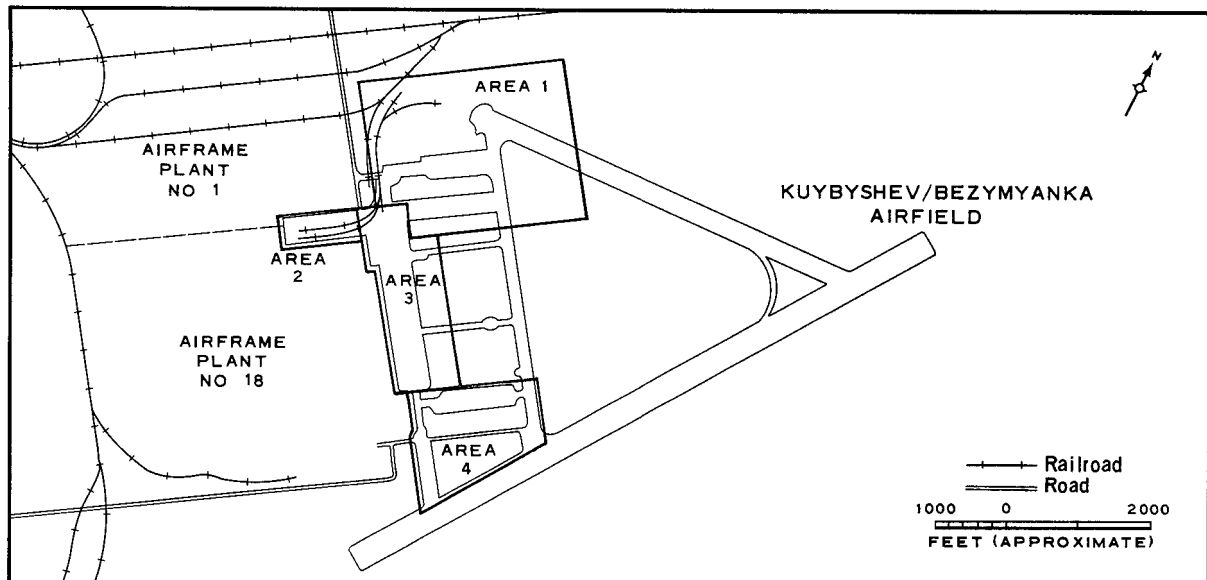


FIGURE 3. AREAS OF THE KUYBYSHEV/BEZMYANKA AIRFIELD WHERE PARKED AIRCRAFT HAVE BEEN OBSERVED.

This table shows the numbers and types of aircraft observed at specific areas (keyed to Figure 3) of the Kuybyshev/Bezymyanka Airfield adjacent to Airframe Plants No 1 and No 18.

Mission*	Date	Area 1	Area 2	Area 3	Area 4
		19 BADGER	4 BADGER	7 BEAR	8 BEAR
		1 CRATE		3 CLEAT	
		3 CAB			3 CAB
		2 CREEK			1 MULE
				10 large sweptwing 1 unidentified	1 large sweptwing 2 small unidentified
				9 large sweptwing	
		Poor-quality photography; no aircraft discernible.			
				4 possible aircraft	Several possible aircraft
		3 possible aircraft		3 large unidentified	4 possible aircraft

Kuybyshev 1-4

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Mission*	Date	Area 1	Area 2	Area 3	Area 4
				6 large sweptwing	6 large sweptwing 4 small unidentified
				7 large sweptwing	5 large sweptwing 6 small unidentified
				9 large unidentified	5 large unidentified
				5 unidentified	7 unidentified
				9 large sweptwing	6 large sweptwing
				1 small unidentified	1 large sweptwing 6 medium sweptwing
				8 large sweptwing 3 unidentified	2 medium sweptwing 1 small unidentified

25X1

\*The first mission listed, B-8005, is TALENT; the rest are KEYHOLE.

Kuybyshev 1-5

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

**KUYBYSHEV: AIRCRAFT ENGINE PLANT NO 24****PHOTOGRAPHIC CHRONOLOGY**

Photographic coverage of Aircraft Engine Plant No 24 was obtained by the Germans in 1943, and extremely high-quality TALENT photography was obtained in [REDACTED] Subsequent KEYHOLE photography obtained in [REDACTED] was of relatively low quality and permitted very little analysis. KEYHOLE photography of [REDACTED] was of higher quality and permitted the detailed comparisons made here with the 1959 photography. The 1961 and early 1962 photography revealed a large assembly- and fabrication-type building (item 17, Figure 2) under construction and about half completed. [REDACTED] photography showed it in the final stages of construction. This building combined with additions of a minor nature on two other buildings (Figure 2) adds approximately 375,000 sq ft to the plant's roof coverage. Photography of [REDACTED] the latest available, reveals no other change.

25X1

25X1

25X1

25X1

25X1

**EVALUATION**

25X1

The quality of photography to date precludes a final determination of plant activity; however, observations on KEYHOLE photography neither confirm nor deny rocket engine production.

Kuybyshev 2-1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: AIRCRAFT ENGINE PLANT NO 24 AT KUYBYSHEV

NPIC H-5303 (10/63)

25X1

Kuybyshev 2-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

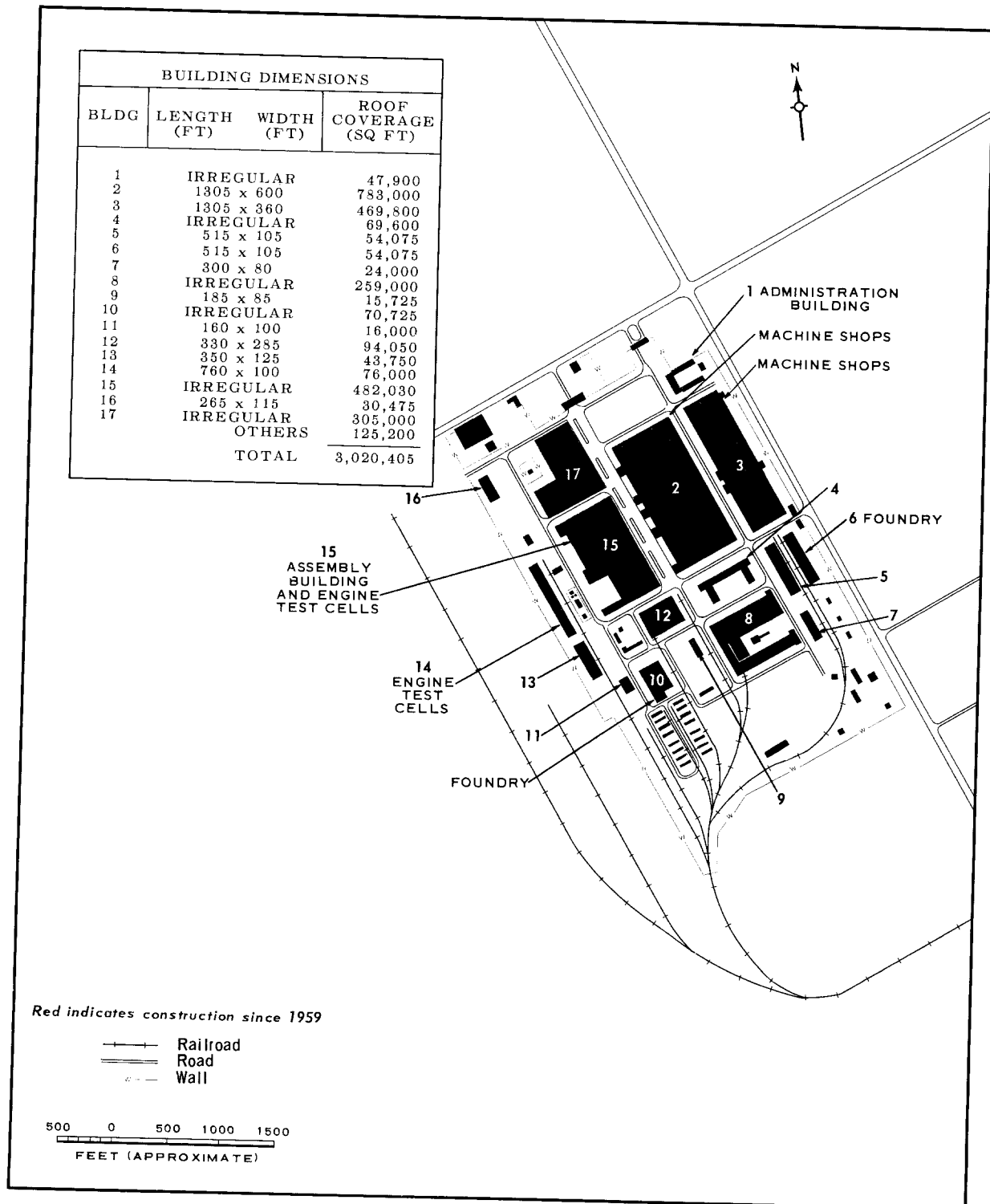


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ENGINE PLANT NO 24 AT KUYBYSHEV. NPIC H-5304 (10/63)

Kuybyshev 2-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

**KUYBYSHEV: ROCKET TEST FACILITY AT KURUMOCH****PHOTOGRAPHIC CHRONOLOGY**

The Kurumoch test facility was first seen on TALENT photography of [redacted] 25X1  
[redacted] At that time the facility was in an early stage of construction. Subsequent KEYHOLE photography has revealed the site as being greatly enlarged.

This facility currently contains one completed test stand (item 1, Figure 2) and a probable test stand (item 2) under construction. The completed test stand (item 1) was under construction when first observed on TALENT photography of [redacted] and was seen to be complete on KEYHOLE photography from [redacted] 25X1  
[redacted] The other test stand (item 2) was first seen on photography from [redacted] 25X1  
[redacted] and was still under construction during [redacted] 25X1  
No photographic coverage of this facility has been obtained since [redacted] 25X1  
[redacted] 25X1

In addition to the test-stand construction, major changes that have taken place since the facility was first observed are: completion of support buildings at the completed test stand (item 1), construction of support buildings for the second test stand (item 2), extension (during 1962) of the rail line from the entrance gate to the operational area, and the construction of three towers (items 19, 20, and 21) near the completed test stand. These towers may also be test stands. Two of them were visible on photography from [redacted] 25X1  
[redacted] and the third on photography from [redacted] 25X1  
[redacted] They are probably still under construction because no support structures have been built around them.

Kuybyshev 3-1

TOP SECRET

25X1

~~TOP SECRET~~

25X1

August 1963

**EVALUATION**

Photography provides the basic information on this facility, but the resolution of the photography precludes determination of whether rocket engine testing or captive testing of missile stages is being conducted. To date, transportation vehicles have not been discernible. Estimated completion dates for test-stand construction are mid 1961 for the completed test stand (item 1) and early 1963 for the other (item 2).

Kuybyshev 3-1 (Continued)

~~TOP SECRET~~

25X1

August 1963

25X1



FIGURE 1. USSR: ROCKET TEST FACILITY AT KURUMOCH

NPIC H-5305 (10/63)

Kuybyshev 3-2

25X1

TOP SECRET

25X1



TOP SECRET

25X1

August 1963

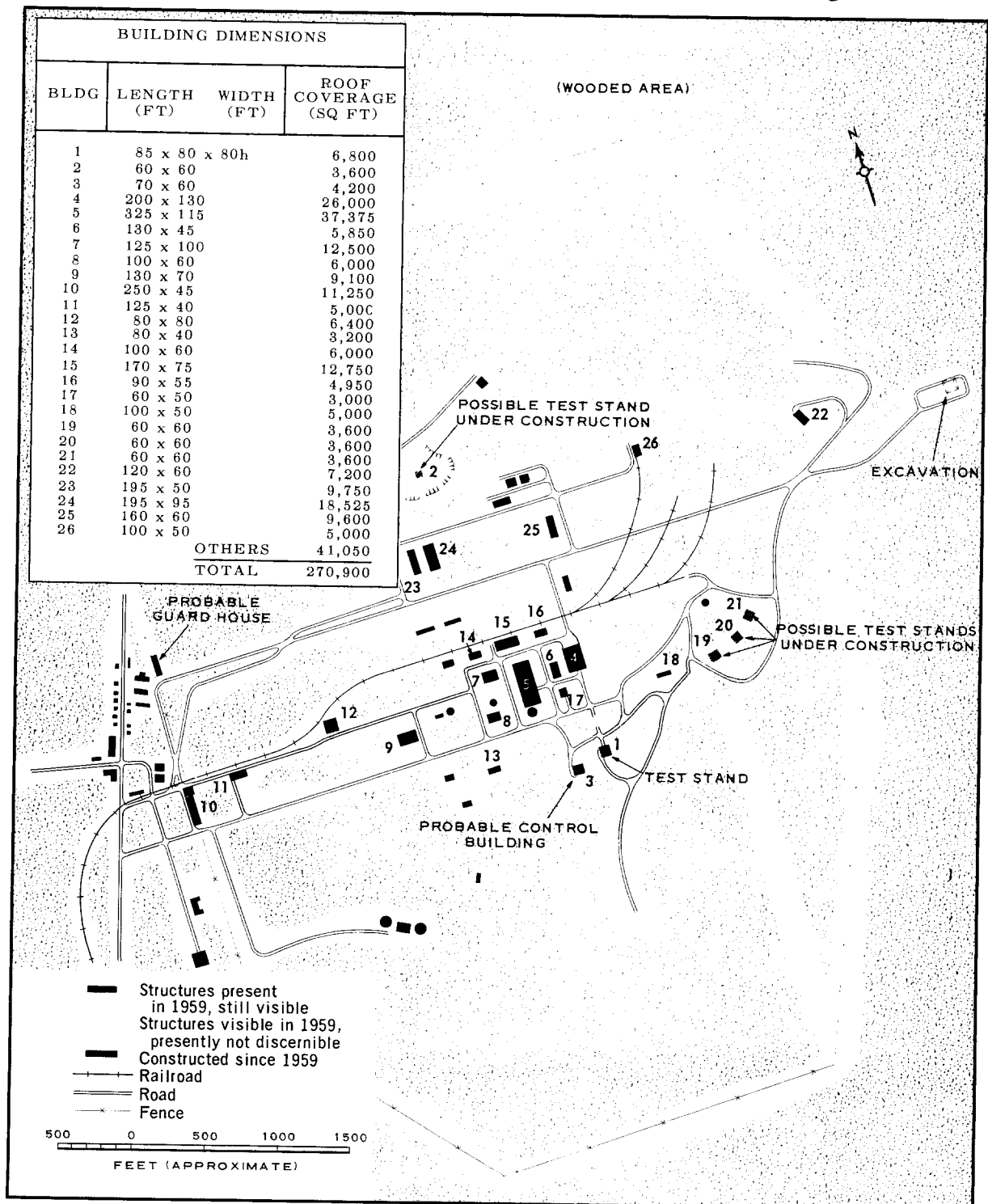


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF ROCKET TEST FACILITY AT KURUMOCH. NPIC H-5306 (10/63)

Kuybyshev 3-3

TOP SECRET

25X1

~~TOP SECRET~~

25X1

August 1963

## MOSCOW

	<u>Section</u>	
City of Moscow	0	
Missile Development Plant No 88, Kaliningrad 55-55N 37-48E; [REDACTED]	1	25X1
Special Design Bureau (OKB)/Plant No 456, Khimki 55-54N 37-27E; [REDACTED]	2	25X1
Rocket Test Facility near Zagorsk 56-27N 38-12E; [REDACTED]	3	25X1

Moscow 0-1

~~TOP SECRET~~

25X1

TOP SECRET

25X1

August 1963

25X1

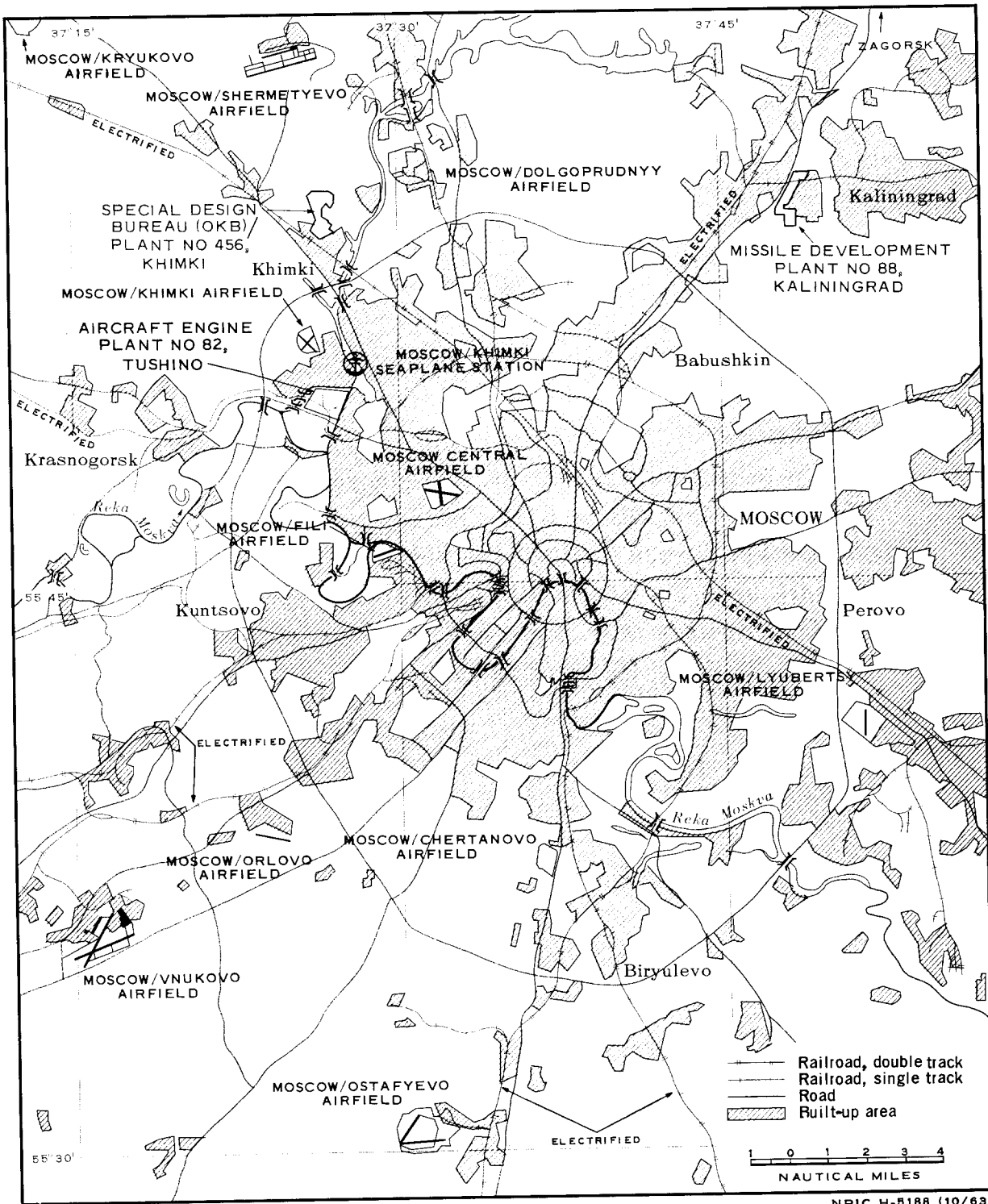


FIGURE 1. USSR: CITY OF MOSCOW.

Moscow 0-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

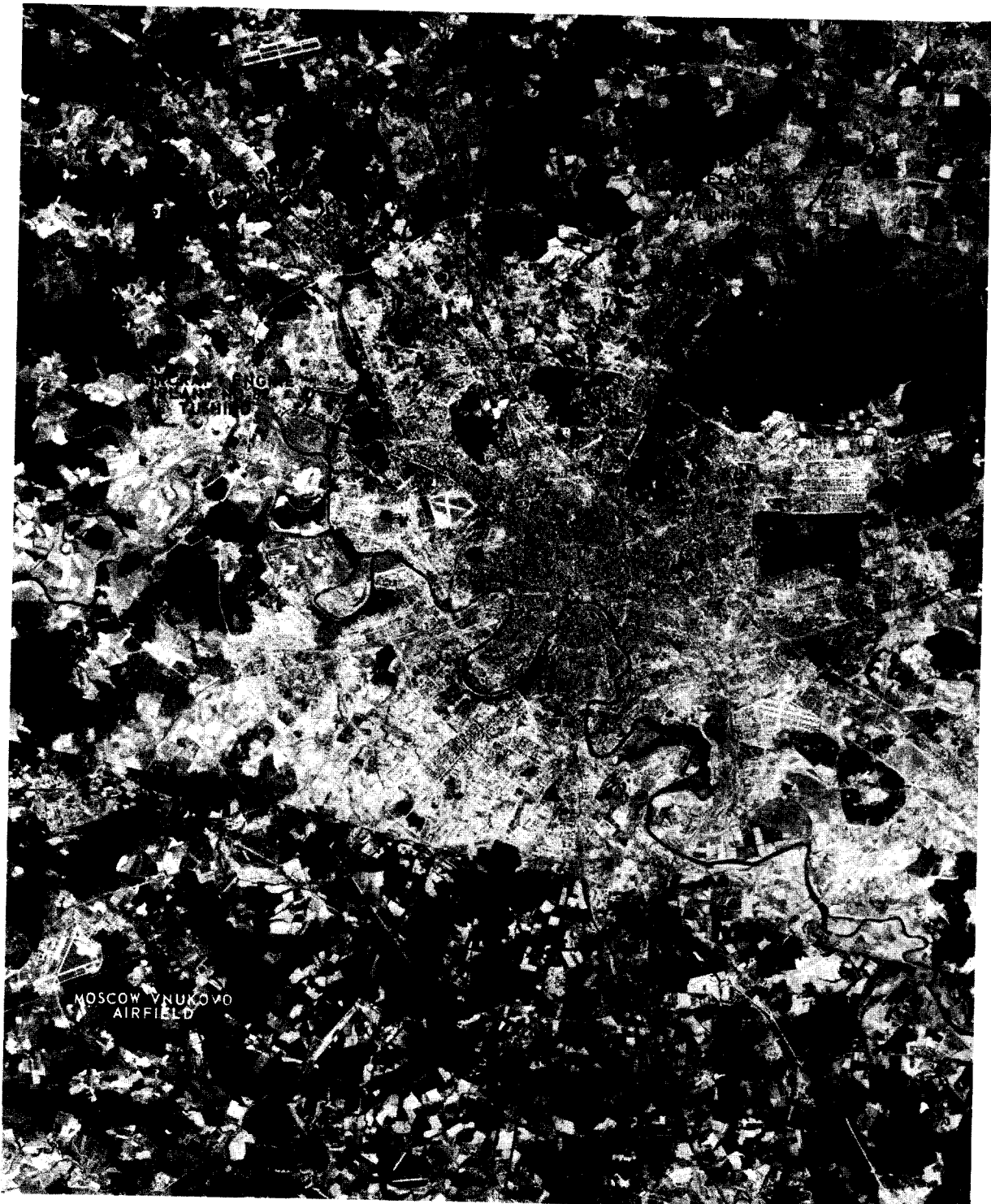


FIGURE 2. USSR: CITY OF MOSCOW

NPIC H-5189 (10/63)

25X1

Moscow 0-3

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

## **MOSCOW: MISSILE DEVELOPMENT PLANT NO 88, KALININGRAD**

### **PHOTOGRAPHIC CHRONOLOGY**

This facility was not covered by TALENT missions. Very little good-quality KEYHOLE photography is available. The best photography to date, from [ ] reveals that the plant has more than doubled in size since it was photographed by the Germans during World War II.

25X1

### **EVALUATION**

Scientific Research Institute (NII)/Plant No 88, Kaliningrad, Moscow Oblast, is a major center in the USSR for research and development of surface-to-surface ballistic missiles. It may also be engaged in the development of some of the space capsules.

In addition to its early role in the development of the short-range ballistic missiles, this plant is believed to have developed the SS-2, SS-3, SS-6, and SS-8. Development of the SS-1, SS-4, SS-5, and SS-7 is attributed to another design team which is probably located at, or associated with, Dnepropetrovsk\*. There is some evidence, based on flight activity, which may be interpreted as indicating that Plant No 88 has shown an interest in the SS-5 and possibly in the SS-7, which is believed to have design similarities.

The external evidence indicates that by 1956 Plant No 88 had the capability to manufacture and/or to test a very large vehicle and that large rocket engines had been static fired in the area at a relatively high rate for the past several years. Also, a large new administration,

\*See Dnepropetrovsk, Section 3, DMDPC Test Facility.

Moscow 1-1

**TOP SECRET**

25X1

~~TOP SECRET~~

25X1

August 1963

assembly and fabrication building (item 23, Figure 2), which apparently was not phased to support the initial program for research and development for the strategic missiles and space vehicles, was under construction in Area B in [ ] and probably was completed and equipped by [ ]

25X1  
25X1

Photography confirms the general layout of the plant and the estimated total roof coverage (Figure 2); however, KEYHOLE photography alters previously estimated measurements of some of the principal buildings. No engine test facilities have been identified.

Moscow 1-1 (Continued)

~~TOP SECRET~~

25X1

TOP SECRET

25X1

August 1963

25X1



NPIC H-5190 (10/63)

FIGURE 1. USSR: MISSILE DEVELOPMENT PLANT NO 88, KALININGRAD

25X1

Moscow 1-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

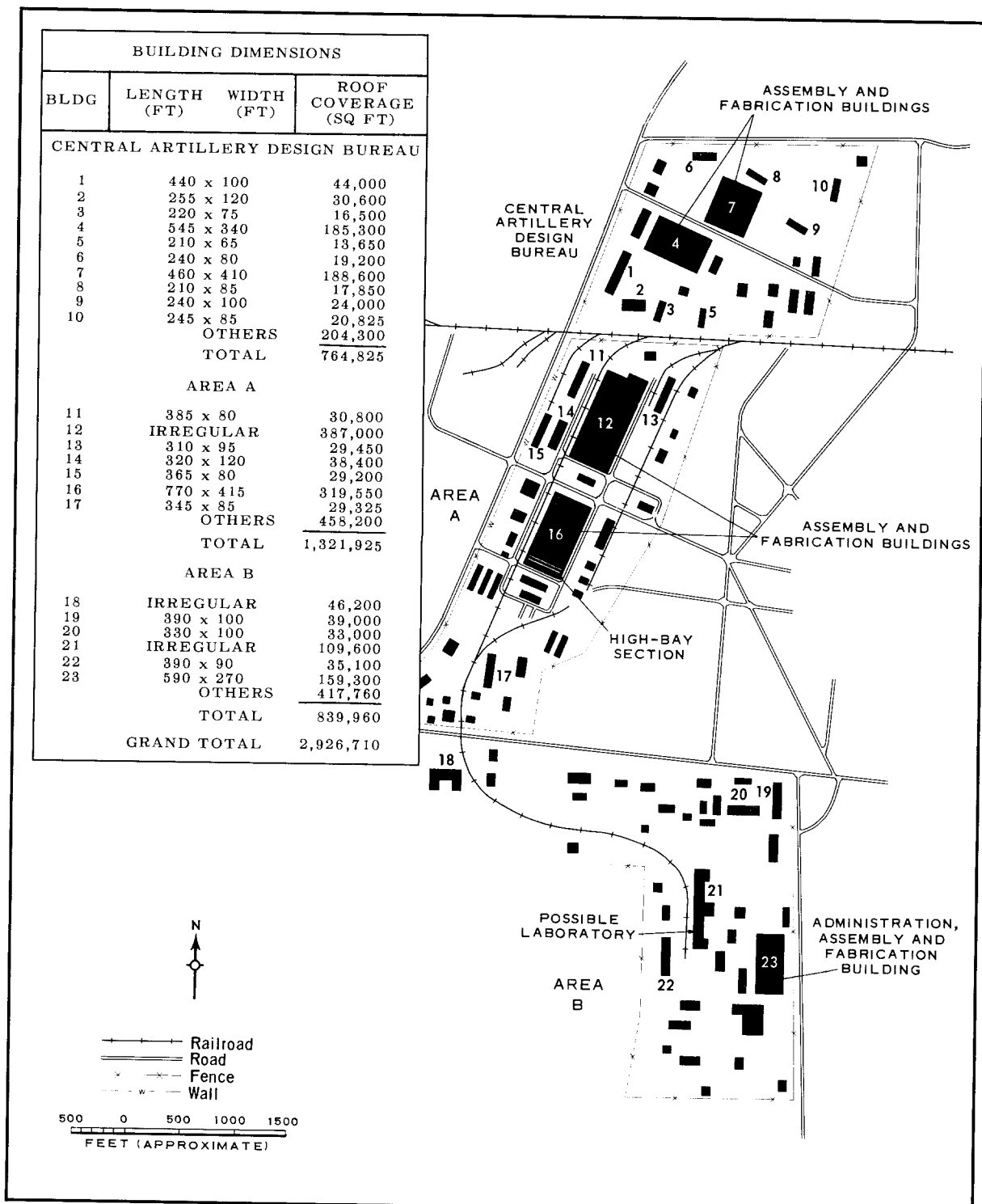


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF MISSILE DEVELOPMENT PLANT NO 88, KALININGRAD. NPIC H-5191 (10/63)

Moscow 1-3

TOP SECRET

25X1



**TOP SECRET**

25X1

August 1963

**MOSCOW: SPECIAL DESIGN BUREAU  
(OKB)/PLANT NO 456, KHMKI**

**PHOTOGRAPHIC CHRONOLOGY**

Photography from [ ] the first good-quality photography of this installation, confirms the general layout of the plant area reported by collateral sources through the mid-1950s and indicates that no major changes have taken place since that time. Three possible test stands have been located; however, photographic quality precludes discernment of details. Considerable construction is underway adjacent to the plant area on the site of the former Khimki airfield, but there is no evidence at present to confirm or deny connection of this construction with Plant No 456.

25X1

**EVALUATION**

Evidence concerning Special Design Bureau (OKB)/Plant No 456 in Moscow/Khimki (Figures 1 and 2) supports the conclusion that it is the major rocket engine research and development facility in the USSR. It is very probable that the rocket engines utilized on some, if not all, Soviet ICBMs and other missiles were developed at this plant.

Moscow 2-1

**TOP SECRET**

25X1

August 1963

25X1



FIGURE 1. USSR: SPECIAL DESIGN BUREAU (OKB)/PLANT NO 456, KHMKI

25X1

Moscow 2-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

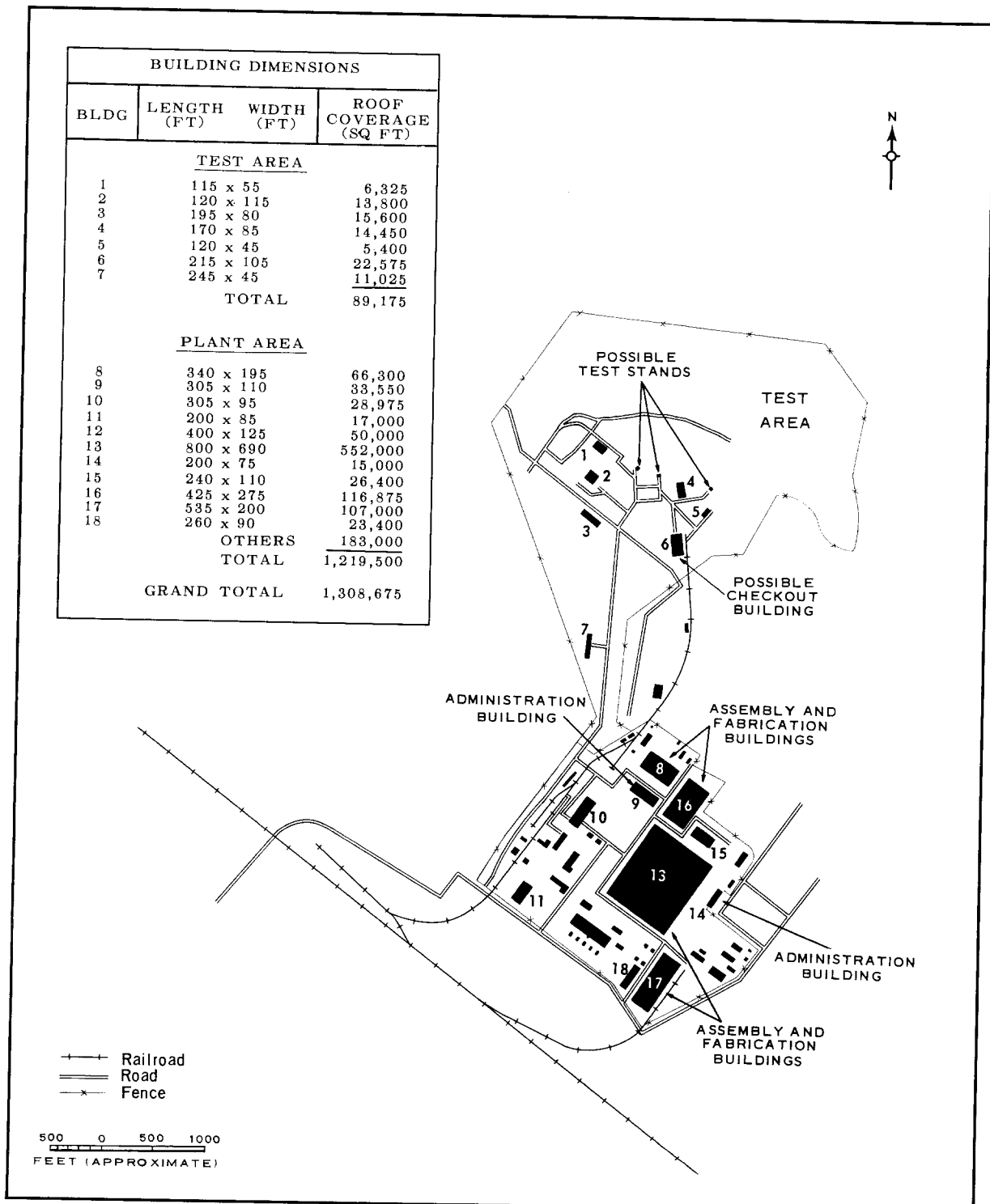


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF SPECIAL DESIGN BUREAU (OKB)/PLANT NO 456, KHIKMI. NPIC H-5193 (10/63)

Moscow 2-3

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

**MOSCOW: ROCKET TEST FACILITY NEAR ZAGORSK****PHOTOGRAPHIC CHRONOLOGY**

The suspect test facility first appeared on KEYHOLE photography from [ ] but details of the installation were not seen clearly until [ ] When first observed the facility was apparently operational; it consisted of three vertical test stands and of a fourth area which possibly contained smaller horizontal test stands. It was last seen on photography from [ ] the quality of this photography was poor, and no changes were detected.

25X1

25X1

25X1

**EVALUATION**

The existence of the large static test facility near Zagorsk, [ ] is confirmed by photography which adds considerable detail to the layout of this facility. In the light of collateral information, it appears that the facility has not changed much since the mid-1950s. (See Moscow, Sections 1 and 2, for details on installations believed to use this test facility.)

25X1

25X1

Moscow 3-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1

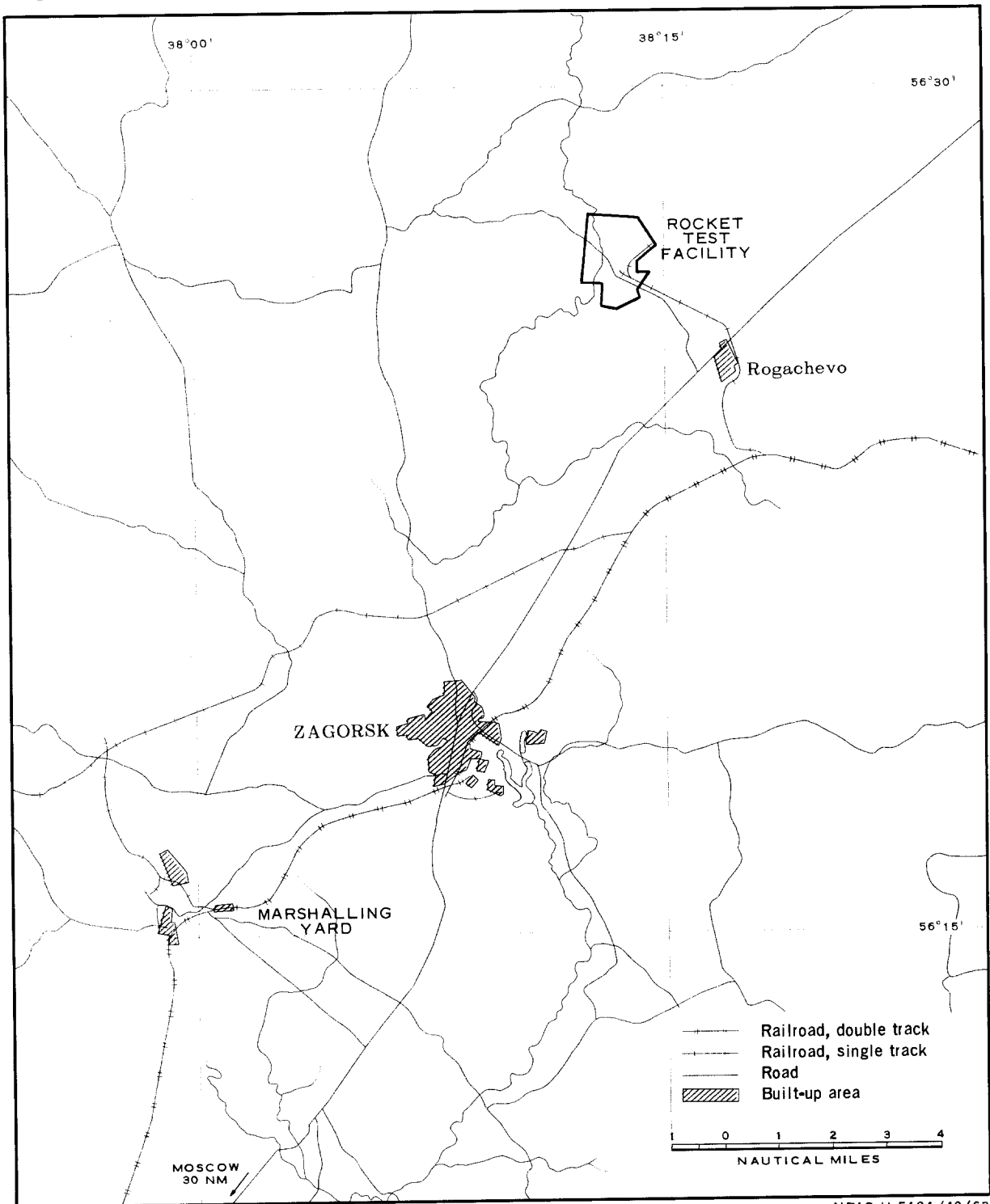


FIGURE 1. USSR: LOCATION OF ROCKET TEST FACILITY NEAR CITY OF ZAGORSK.

Moscow 3-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963



FIGURE 2. USSR: ROCKET TEST FACILITY NEAR ZAGORSK

5 (10/63)

25X1

Moscow 3-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1



NPIC H-5196 (10/63)

FIGURE 3. USSR: ROCKET TEST FACILITY NEAR ZAGORSK

25X1

Moscow 3-4

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

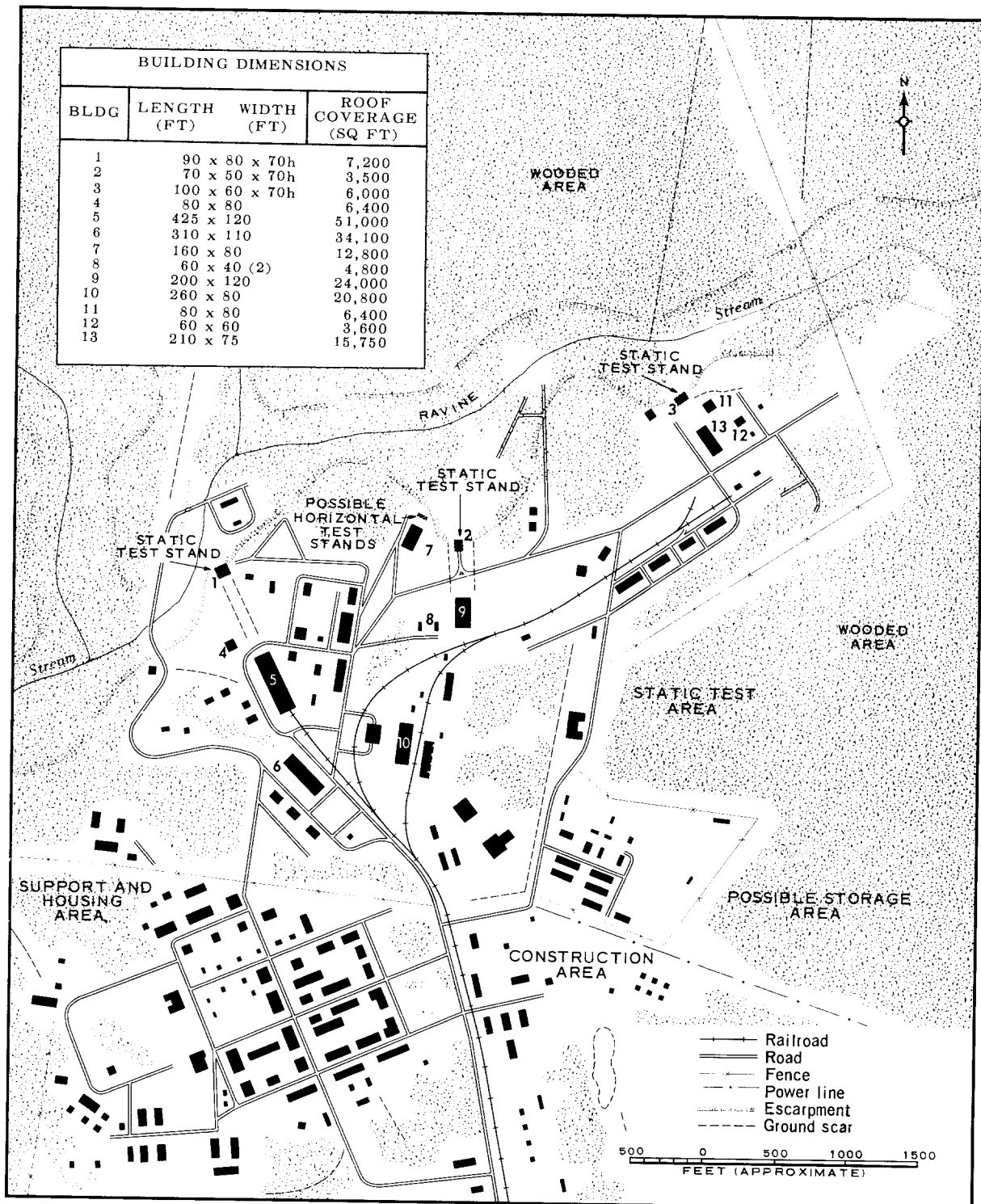


FIGURE 4. USSR: LAYOUT AND ROOF COVERAGE OF ROCKET TEST FACILITY NEAR ZAGORSK. NPIC H-5197 (10/63)

Moscow 3-5

TOP SECRET

25X1



**TOP SECRET**

25X1

August 1963

## OMSK

	<u>Section</u>	
City of Omsk	0	
Aircraft Engine Plant No 29	1	
54-57N 73-26E; <input type="text"/>		25X1
Airframe Plant No 166	2	
54-57N 73-26E; <input type="text"/>		25X1
Suspect Rocket Test Facility	3	
55-25N 73-17E; <input type="text"/>		25X1

Omsk 0-1

**TOP SECRET**

25X1

**TOP SECRET**

25X1

August 1963

25X1

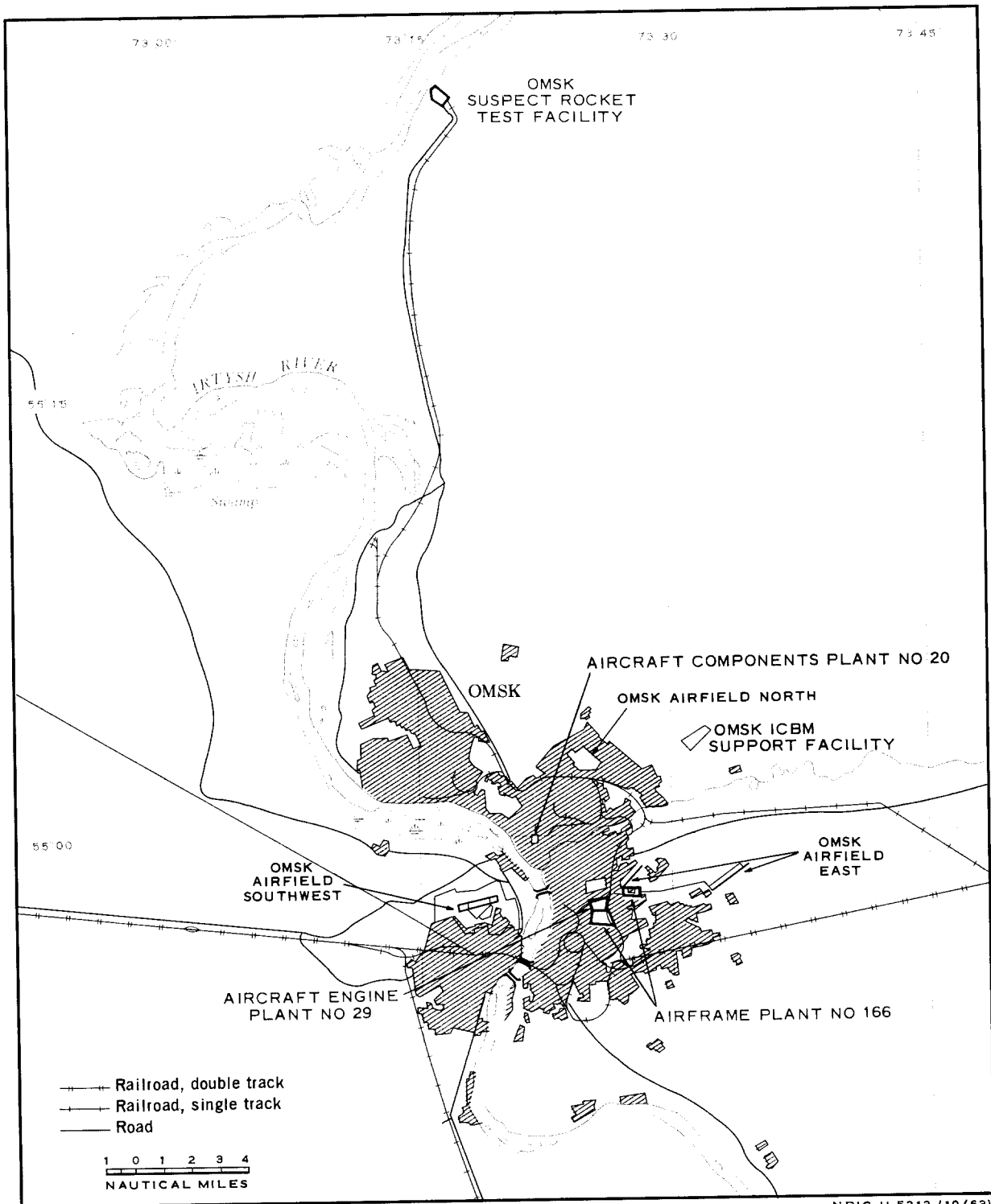


FIGURE 1. USSR: CITY OF OMSK.

NPIC H-5213 (10/63)

Omsk 0-2

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

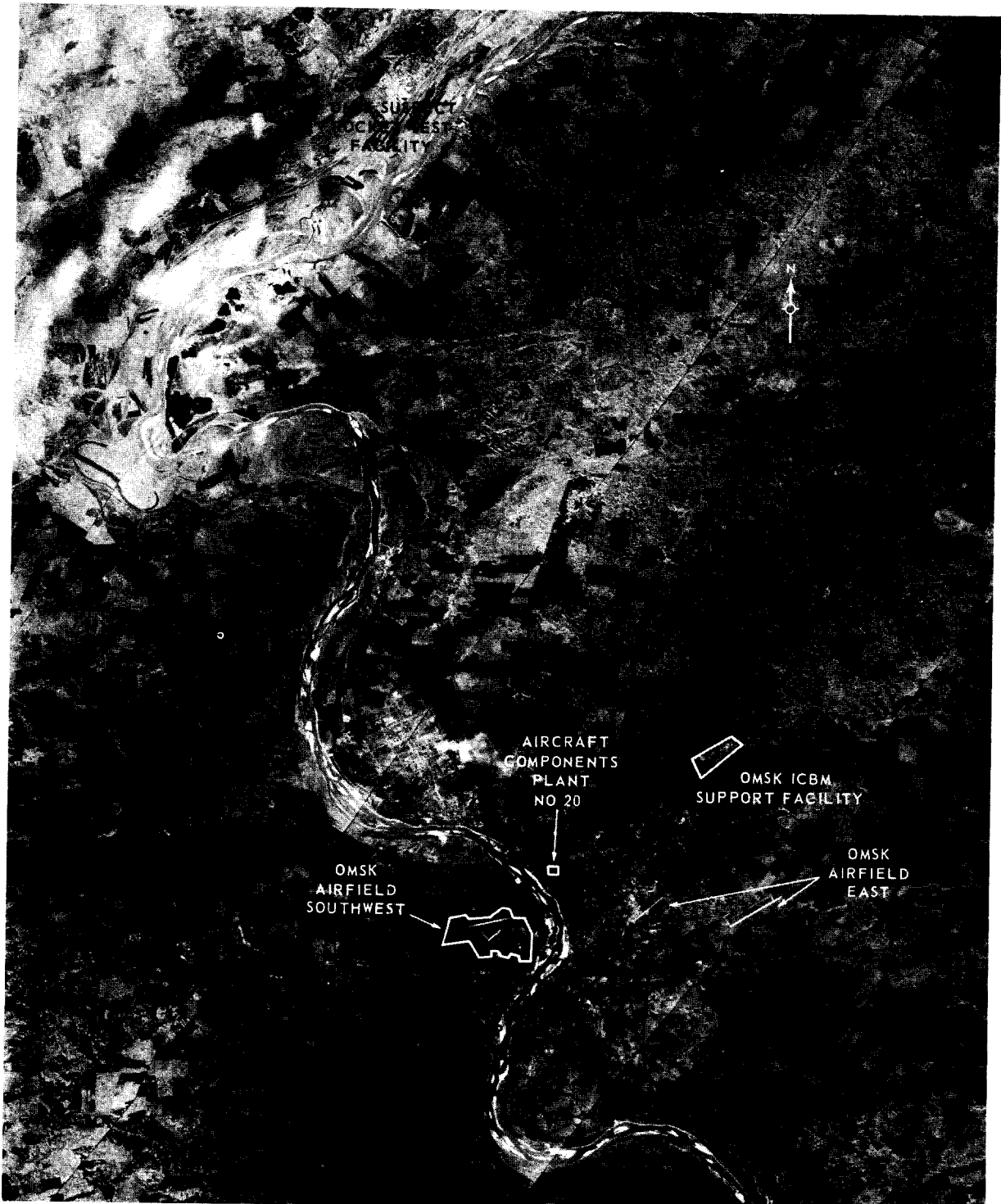


FIGURE 2. USSR: CITY OF OMSK

NPIC H-5214 (10/63)

25X1

Omsk 0-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

## OMSK: AIRCRAFT ENGINE PLANT NO 29

## PHOTOGRAPHIC CHRONOLOGY

This plant was first seen on TALENT photography of 1957. Since then, four new buildings and an addition to a fifth building have increased the plant's roof coverage by almost 600,000 square feet. These buildings were first observed under construction on photography from [redacted] and they were seen to be completed on photography from [redacted]. Photography from [redacted] showed that no changes had taken place at the plant since [redacted].

25X1

25X1

25X1

25X1

## EVALUATION

Aircraft Engine Plant No 29 is one of several plants in Omsk associated with the guided missile program. (See Omsk, Section 2, Airframe Plant No 166.) The first specific association of this facility with a missile-related location occurred in 1959. Since then, there have been several contacts between Plant No 29 and the Kapustin Yar Missile Test Range. Some of the many missile-related flights by Omsk-based GKAT\* aircraft may be in support of this facility.

The reason for plant expansion cannot be determined by photographic interpretation. To date, photography neither confirms nor denies missile activity.

---

\*State Committee for Aviation Technology.

Omsk 1-1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: AIRCRAFT ENGINE PLANT NO 29 AT OMSK

Omsk 1-2

TOP SECRET

25X1

25X1

TOP SECRET

25X1

25X1

August 1963

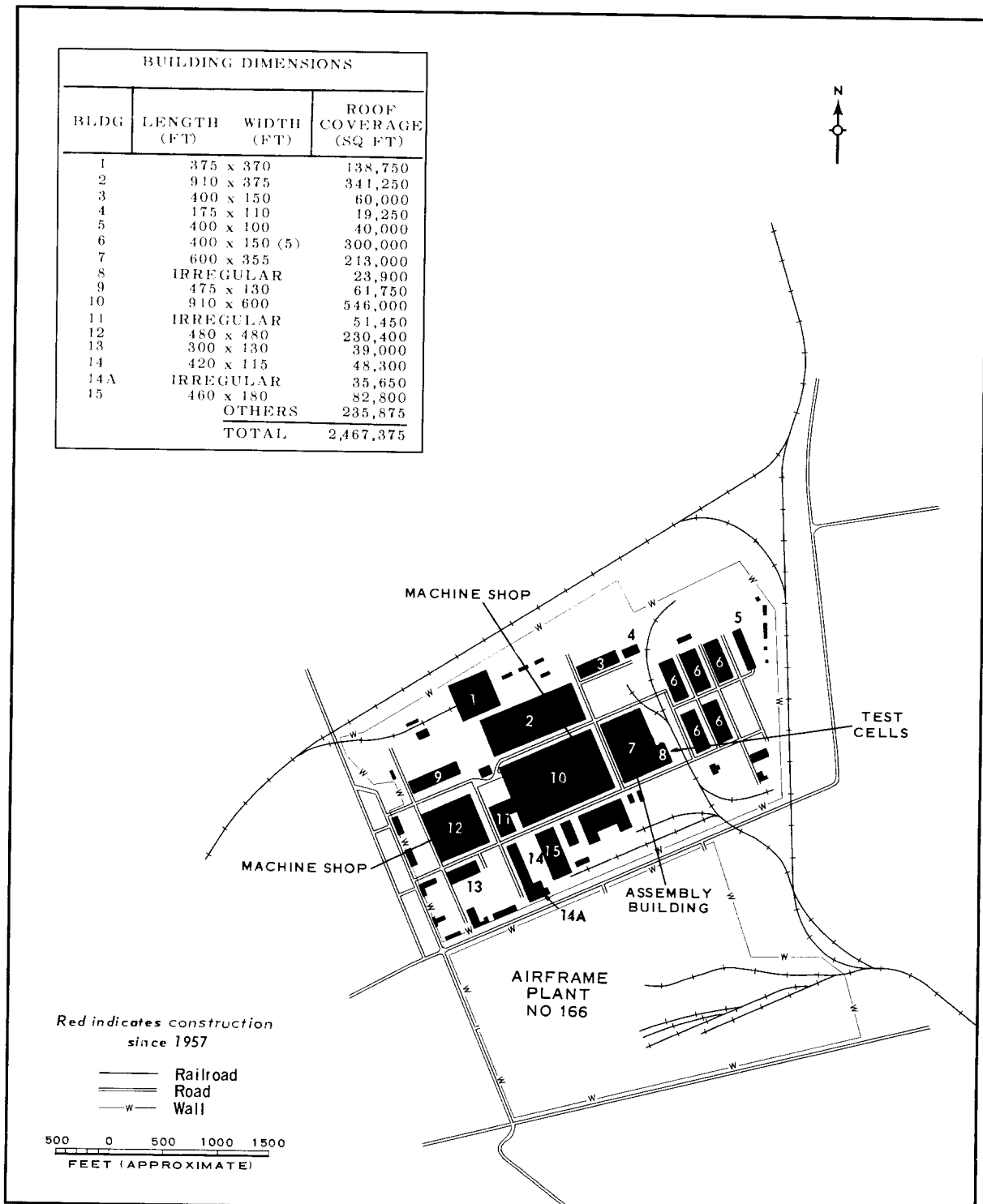


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ENGINE PLANT NO 29 AT OMSK. NPIC H-5216 (10/63)

Omsk 1-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

## OMSK: AIRFRAME PLANT NO 166

## PHOTOGRAPHIC CHRONOLOGY

The Omsk Airframe Plant No 166 was first seen on TALENT photography of 1957. Since then, one building (item 7, Figure 2) has been enlarged. This change was seen on KEYHOLE photography from [REDACTED] [REDACTED]. A new wing was under construction at the final assembly building (item 9A) in [REDACTED] and this wing was seen to be complete on photography from [REDACTED].

25X1

25X1

25X1

25X1

## EVALUATION

Airframe Plant No 166 is one of several plants in Omsk associated with the guided missile program. [REDACTED]

25X1

25X1

Until early 1960, Plant No 166 was engaged in the production of TU-104 (CAMEL) transports. There is evidence that it is now engaged in the production of the new Tupolev-designed fighter aircraft known as FIDDLER.

25X1

\*State Committee for Aviation Technology.

Omsk 2-1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1

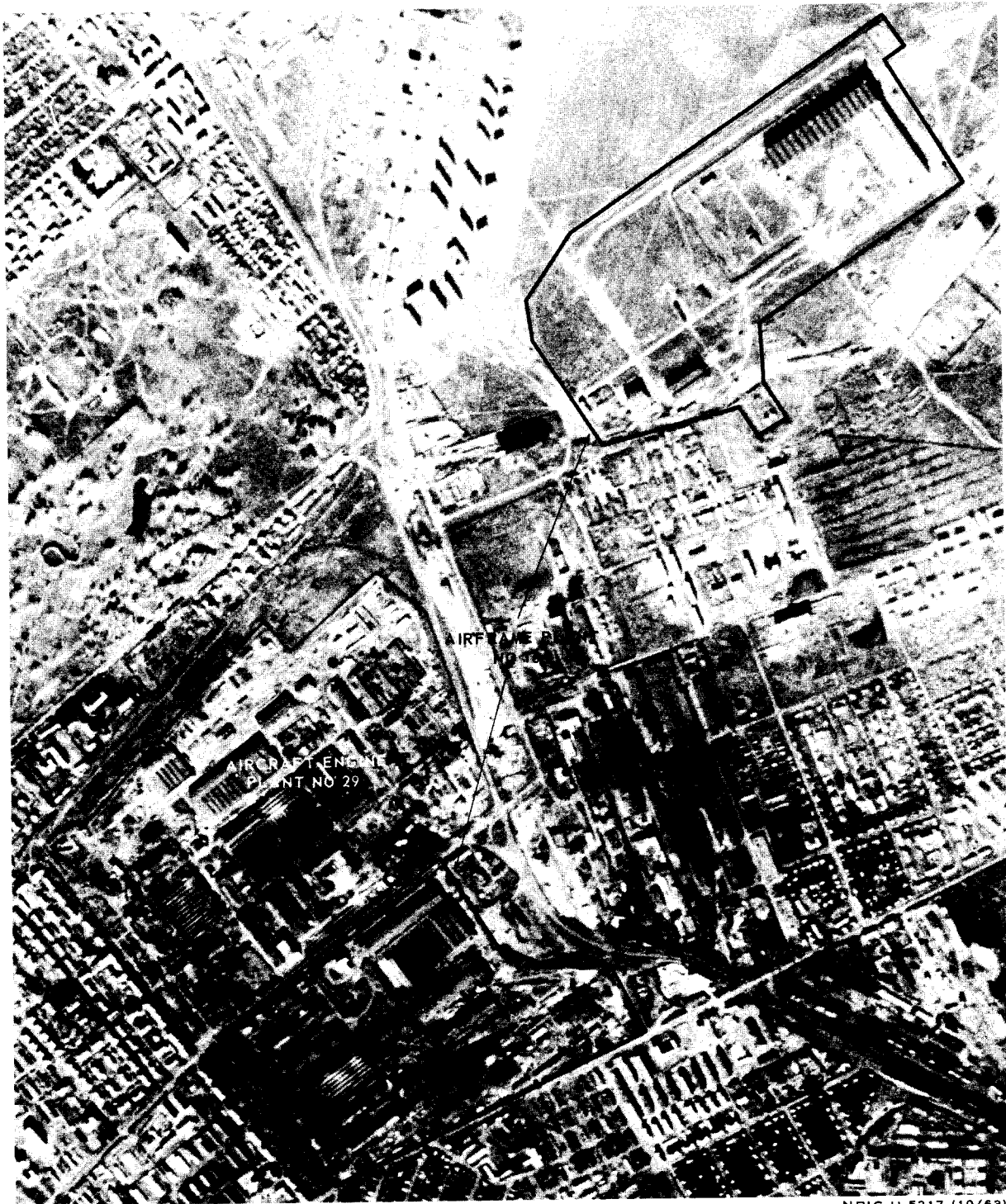


FIGURE 1. USSR: AIRFRAME PLANT NO 166 AT OMSK

Omsk 2-2

TOP SECRET

25X1

25X1



TOP SECRET

25X1

August 1963

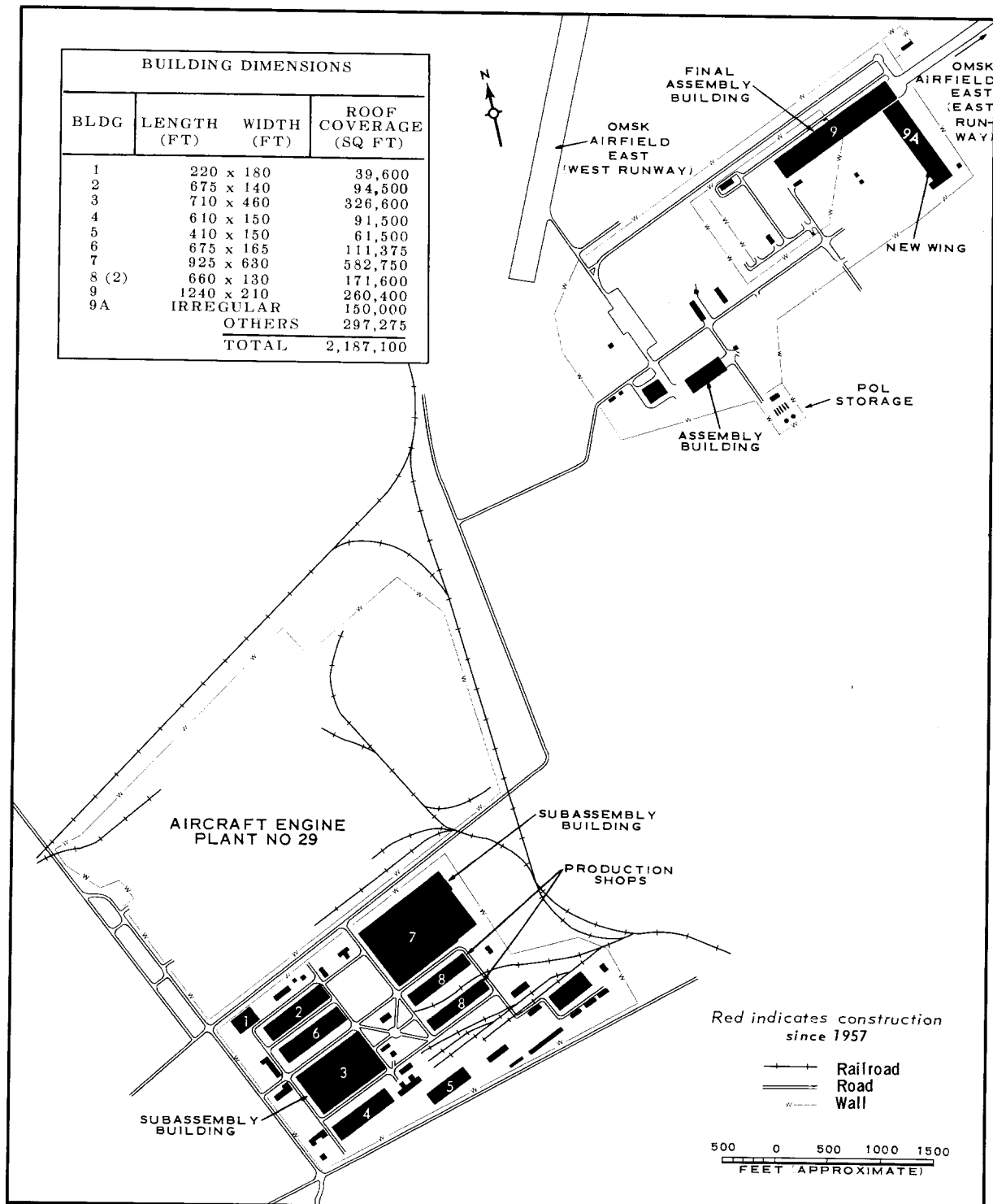


FIGURE 2. LAYOUT AND ROOF COVERAGE OF AIRFRAME PLANT NO 166 AT OMSK. NPIC H-5218 (10/63)

Omsk 2-3

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

25X1

**AIRCRAFT COUNT**

Number of Aircraft Observed at Omsk Airfield East  
Adjacent to Aircraft Engine Plant No 29 and Airframe Plant No 166

2 CAMEL at Omsk Airfield East (west runway)

1 CAB at Omsk Airfield East (west runway)

1 CRATE at Omsk Airfield East (west runway)

Quality of photography precluded observation of aircraft.

Quality of photography precluded observation of aircraft.

Quality of photography precluded observation of aircraft.

Quality of photography precluded observation of aircraft.

Quality of photography precluded observation of aircraft.

1 CAT/CUB at Omsk Airfield East (east runway)

2 probable CAB at Omsk Airfield East (east runway)

30 to 40 possible fighter planes\* at Omsk Airfield East (east runway)

1 possible fighter plane\* at doors of final assembly building of Omsk  
Airframe Plant No 166

1 CAT/CUB at Omsk Airfield East (east runway)

3 probable CAB at Omsk Airfield East (east runway)

32 probable fighter planes\* at Omsk Airfield East (east runway)

1 probable fighter plane\* at doors of final assembly building of  
Omsk Airframe Plant No 166

\*Estimated size: Length - 40 to 50 ft; wing span - 25 to 35 feet.

Omsk 2-4

**TOP SECRET**

25X1

**TOP SECRET**

25X1

August 1963

**OMSK: SUSPECT ROCKET TEST FACILITY****PHOTOGRAPHIC CHRONOLOGY**

This suspect rocket test facility north of Omsk was first seen on photography from KEYHOLE [REDACTED]. At that time the facility appeared operational with one static test stand. Scars of construction were observed on photography from [REDACTED] [REDACTED] later, on photography from [REDACTED] [REDACTED] these scars were recognized as a second test stand under construction, but it was still in an early stage of construction at that time.

25X1

25X1

25X1

25X1

**EVALUATION**

25X1

Omsk 3-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: SUSPECT ROCKET TEST FACILITY NEAR OMSK

NRIC H-5219 (10/69)

25X1

Omsk 3-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

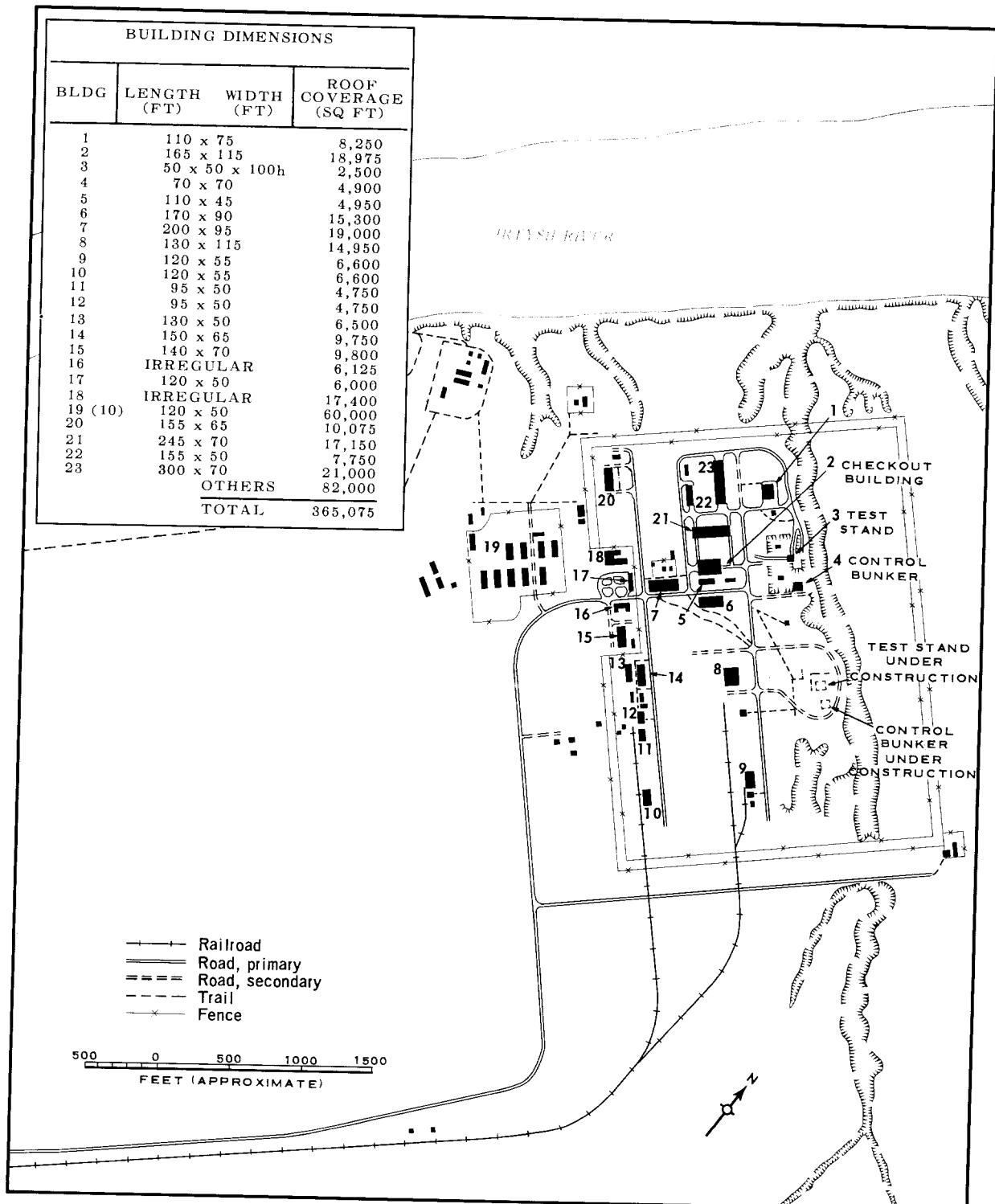


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF SUSPECT ROCKET TEST FACILITY NEAR OMSK. NPIC H-5220 (10/63)

Omsk 3-3

TOP SECRET

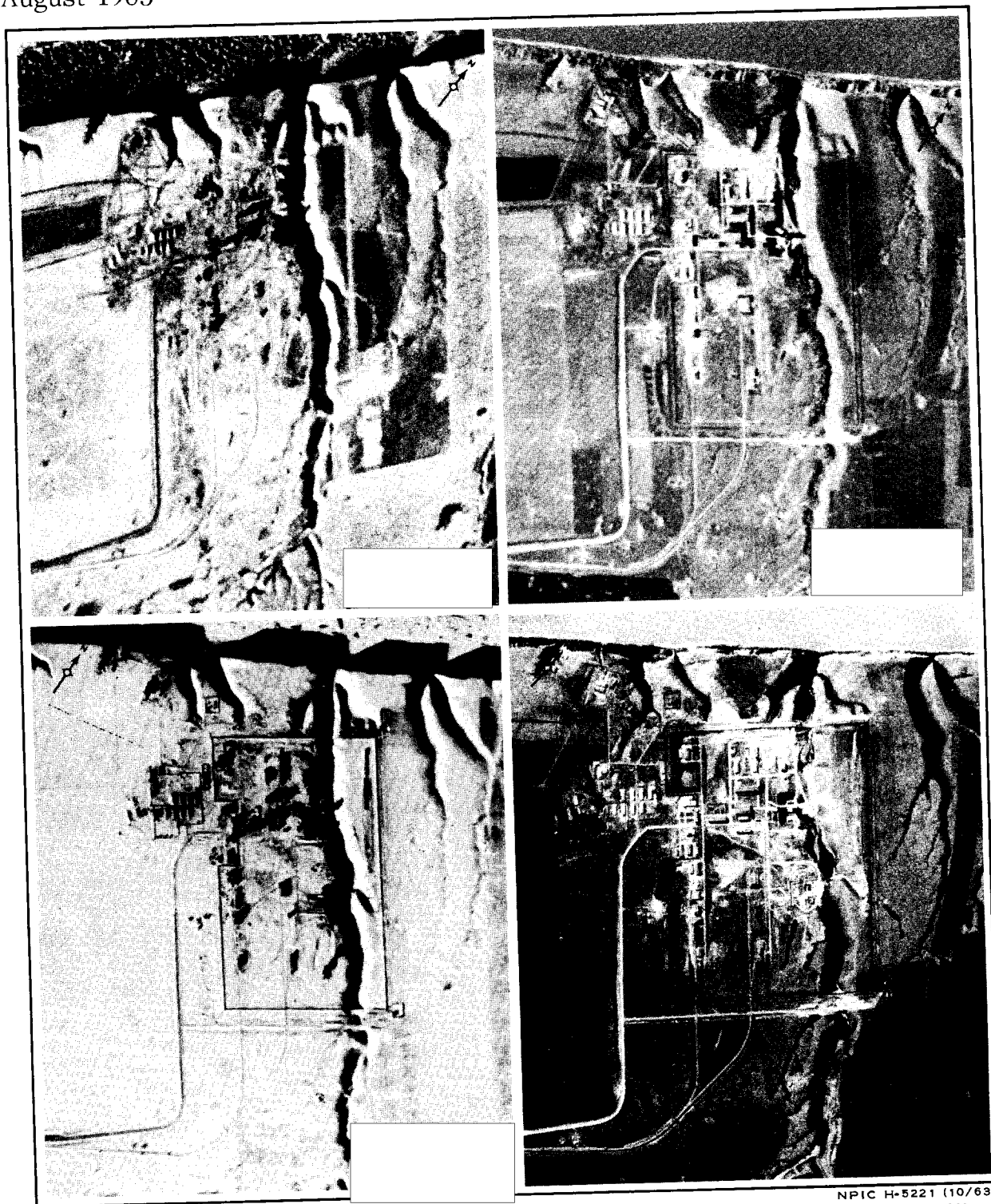
25X1

TOP SECRET

25X1

August 1963

25X1



25X1  
25X1

25X1

FIGURE 3. USSR: COMPARATIVE PHOTOGRAPHY OF SUSPECT ROCKET TEST FACILITY AT OMSK.

Omsk 3-4

TOP SECRET

25X1

~~TOP SECRET~~

25X1

August 1963

PEIPING

Section

City of Peiping

0

Rocket Test Facility at Chang-hsin-tien

1

39-49N 116-08E;

25X1

Peiping 0-1

~~TOP SECRET~~

25X1

TOP SECRET

25X1

August 1963

25X1

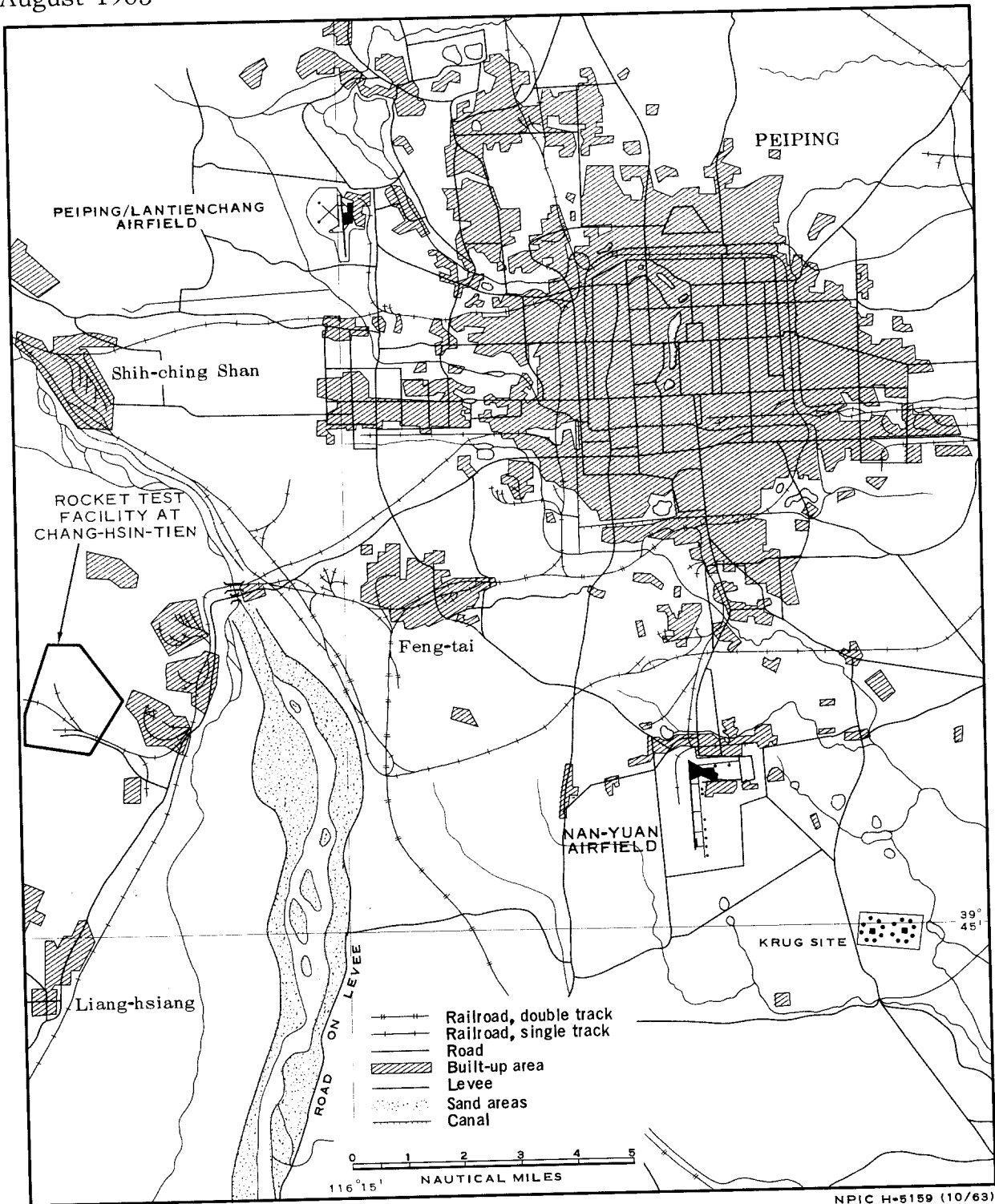


FIGURE 1. CHINA: CITY OF PEIPING.

Peiping 0-2

TOP SECRET

25X1



TOP SECRET

25X1

August 1963



FIGURE 2. CHINA: PEIPING AND THE CHANG-HSIN-TIEN ROCKET TEST FACILITY

NPIC H-5160 (10/63)

25X1

Peiping 0-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

**PEIPING: ROCKET TEST FACILITY AT CHANG-HSIN-TIEN****PHOTOGRAPHIC CHRONOLOGY**

The Peiping Rocket Test Facility was first seen on photography from KEYHOLE [ ] Photography of [ ] 25X1  
[ ] had revealed no construction in progress at the site. In 1961, 25X1  
two test stands (items 1 and 2, Figure 2) were in place as well as approximately 50 percent of the other facilities. When next seen on photography of [ ] construction on a third test stand (item 3, 25X1  
Figure 2) had begun. Photography of [ ] revealed that 25X1  
the third test stand was still under construction, but its major support building (item 6, Figure 2) appeared to be complete.

**EVALUATION**

This installation (Figures 1 and 2) consists of a test-stand area (A), of an area containing laboratory/institutional-type buildings (B), and probably of a third area which contains fabrication/assembly-type buildings (C). On the basis of all evidence, it is currently judged that the third area is a basic part of the installation and that together these facilities compose the center of Chinese Communist missile research and development effort. The test stands are capable of accepting both engines and full-sized missiles for either cold flow tests or hot firing.

Peiping 1-1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. CHINA: ROCKET TEST FACILITY AT CHANG-HSIN-TIEN

25X1

Peiping 1-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

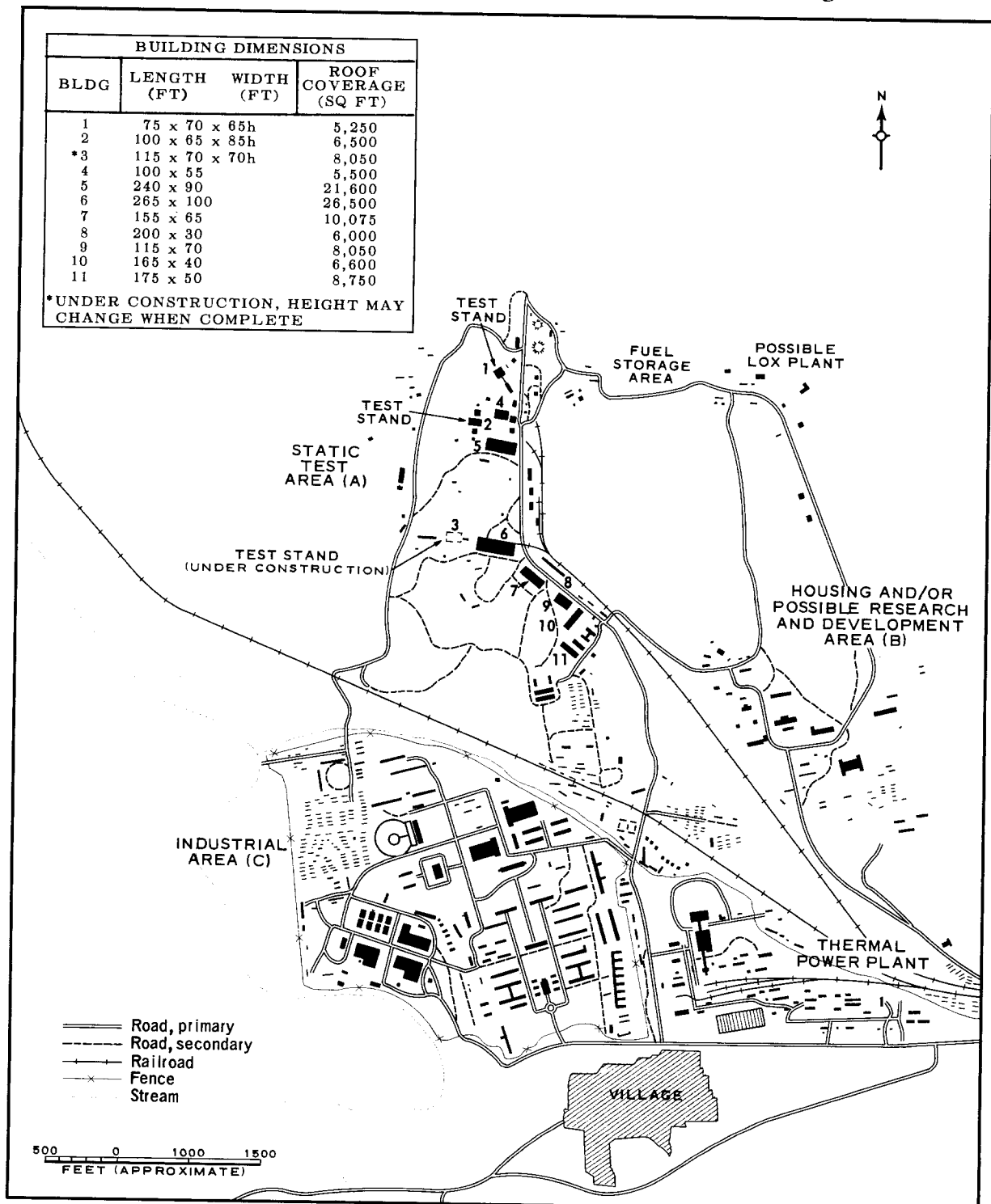


FIGURE 2. CHINA: LAYOUT AND ROOF COVERAGE OF ROCKET TEST FACILITY AT CHANG-HSIN-TIEN. NPIC H-5162 (10/63)

Peiping 1-3

TOP SECRET

25X1

~~TOP SECRET~~

25X1

August 1963

## PERM

	<u>Section</u>	
City of Perm	0	
Armaments Plant No 172	1	
58-02N 56-18E; [REDACTED]		25X1
Aircraft Engine Plant No 19	2	
57-59N 56-15E; [REDACTED]		25X1
Suspect Rocket Test Facility	3	
57-58N 55-49E		

Perm 0-1

~~TOP SECRET~~

25X1

August 1963

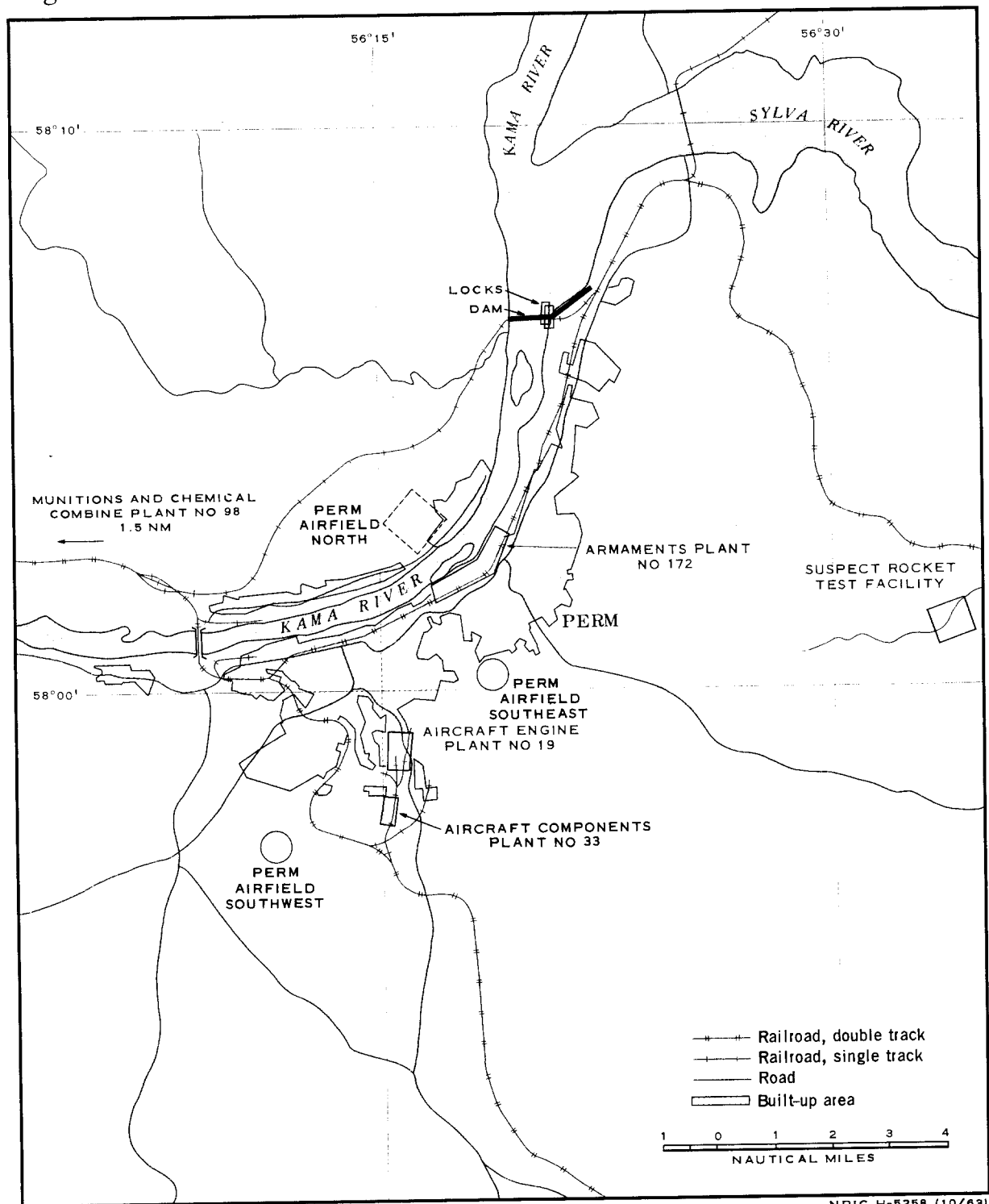


FIGURE 1. USSR: CITY OF PERM.

Perm 0-2

TOP SECRET

TOP SECRET

25X1

August 1963

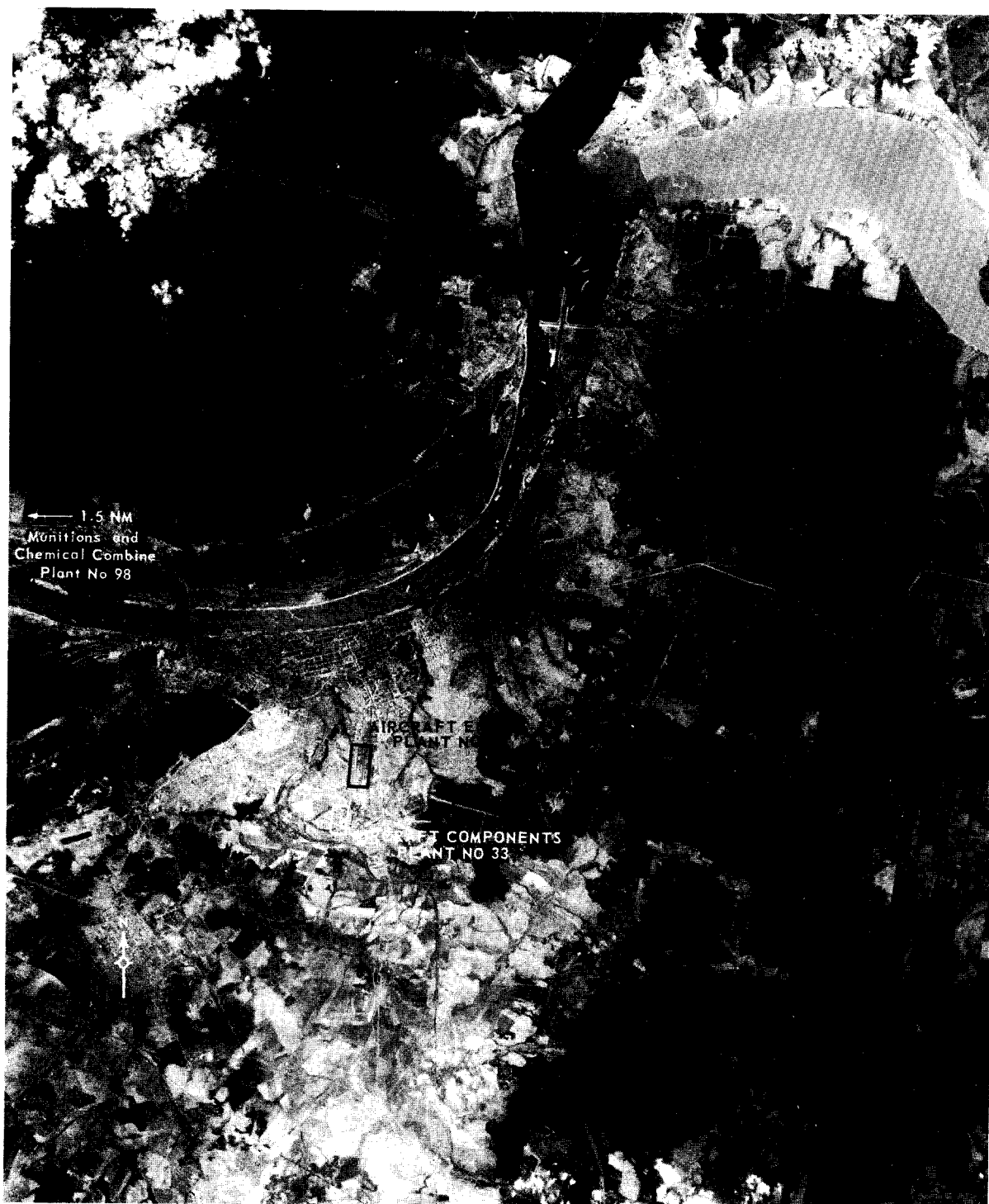


FIGURE 2. USSR: CITY OF PERM

NPIC H-5259 (10/63)

25X1

Perm 0-3

TOP SECRET

25X1



**TOP SECRET**

25X1

August 1963

**PERM: ARMAMENTS PLANT NO 172****PHOTOGRAPHIC CHRONOLOGY**

This plant has been seen on four KEYHOLE [REDACTED]

25X1

25X1

[REDACTED]

During the period of photographic observation there has been no noticeable change.

**EVALUATION**

Armaments Plant No 172 is one of several facilities in Perm that are associated with the guided missile production program. Although these facilities are associated with one another through air service messages, it is not yet confirmed that they are working on the same program. The evidence suggests that Plant No 172 is associated with the series [REDACTED] it is not possible, however, to determine the exact function of the plant. [REDACTED]

25X1

25X1

25X1

[REDACTED]

Photography of [REDACTED] revealed a cylindrical object measuring approximately 100 ft in length and possibly on a rail car adjacent to the Plant No 172 area. This object is unidentified and has no clear association with Plant No 172. Except for this observation, photography to date neither denies nor supports [REDACTED]

25X1

25X1

25X1

[REDACTED] (See Perm, Section 3, Suspect Rocket Test Facility.)

Perm 1-1

**TOP SECRET**

25X1



TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: ARMAMENTS PLANT NO 172 AT PERM

NPIC H-5260 (10/63)

25X1

Perm 1-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

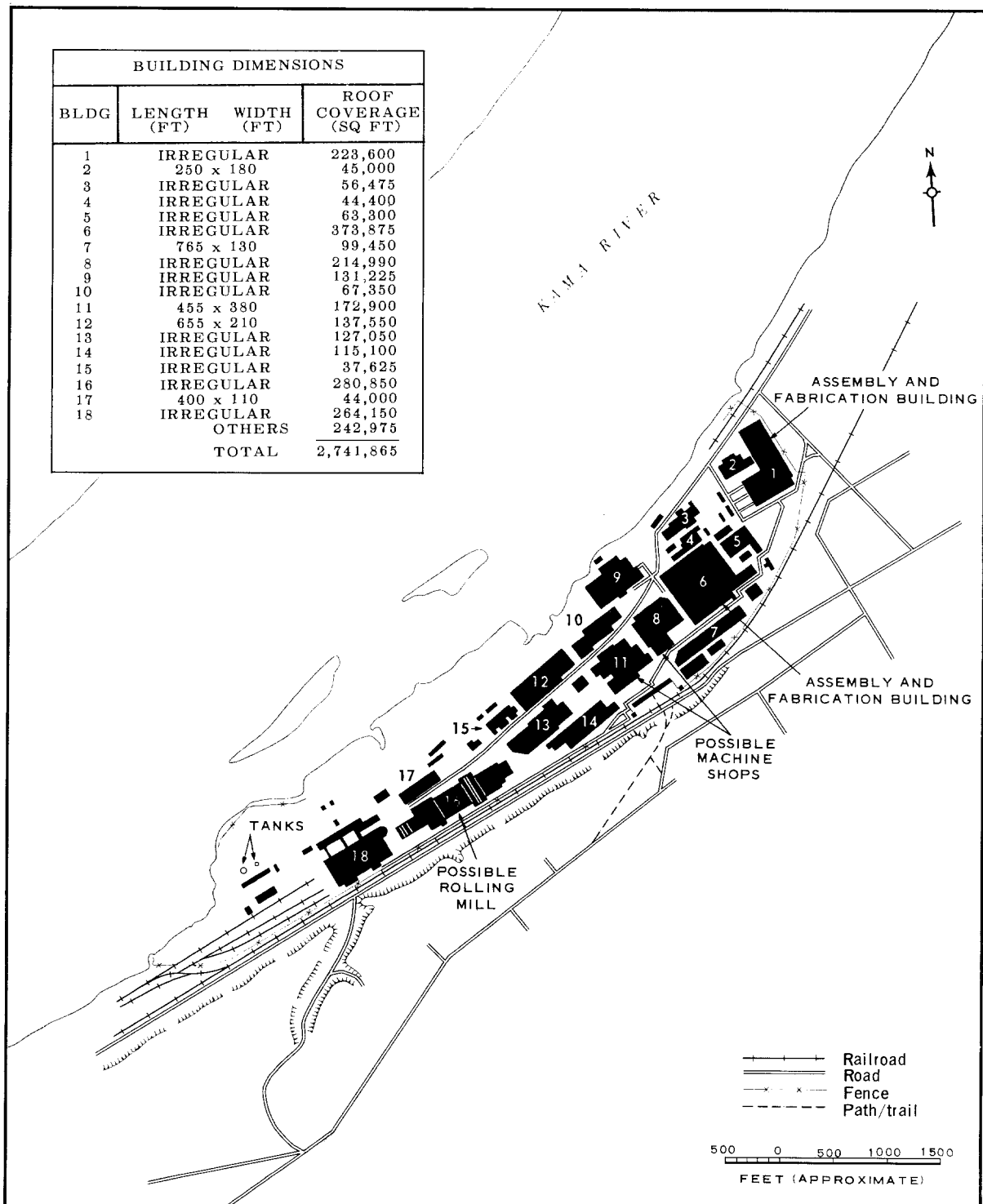


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF ARMAMENTS PLANT NO 172 AT PERM.

NPIC H-5261 (10/63)

Perm 1-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

## PERM: AIRCRAFT ENGINE PLANT NO 19

## PHOTOGRAPHIC CHRONOLOGY

This plant has been seen on photography from four KEYHOLE missions; the latest of these, [ ] has provided the best photography of this installation. It was first seen on photography from [ ] and plant expansion has been observed in progress on all subsequent photography. A new building on the southern side of the plant (item 15, Figure 2) was in an early stage of construction in [ ] and a second large building (item 14) in the same area was observed under construction on photography of [ ]. On the latest photography, both buildings appear to be in a late stage of construction. The second large building (item 14) appears to be fenced from the rest of the plant; this is in accordance with Soviet practice during construction.

25X1

25X1

25X1

25X1

## EVALUATION

As mentioned in the Summary of Armaments Plant No 172 (Perm, page 1-1), a number of facilities in Perm are associated with the Soviet missile program. Although these facilities appear to be associated with one another, it is not confirmed that they are utilized on the same projects. The evidence relating Aircraft Engine Plant No 19 to the missile program is not as direct and clear-cut as in the case of Armaments Plant No 172; nevertheless, Aircraft Engine Plant No 19 is believed to be an integral part of this group of facilities. Four GKAT\* aircraft subordinate to Aircraft Engine Plant No 19 are believed to operate in support of this group in addition to operating in support of normal industrial aviation production in Perm. There were indications of participation by Aircraft Engine Plant No 19 in the Soviet rocket engine program

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\*State Committee for Aviation Technology.

Perm 2-1

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

as early as 1954. The combination of collateral, airflight,

25X1

25X1

25X1

1961.

It is believed that Aircraft Engine Plant No 19 is involved in some as yet unidentified aspect of the Soviet missile program. The most likely association would be with missile propulsion systems or their components. The only confirmed activity at this plant, however, is jet engine production, which has been maintained at a high rate since the mid-1950s. Accordingly, the amount of floor space available for a missile-related program, while unknown, would be limited.

25X1

Perm 2-1 (Continued)

**TOP SECRET**

25X1

TOP SECRET

25X1

25X1

August 1963



FIGURE 1. USSR: AIRCRAFT ENGINE PLANT NO 19 AT PERM (

25X1

Perm 2-2

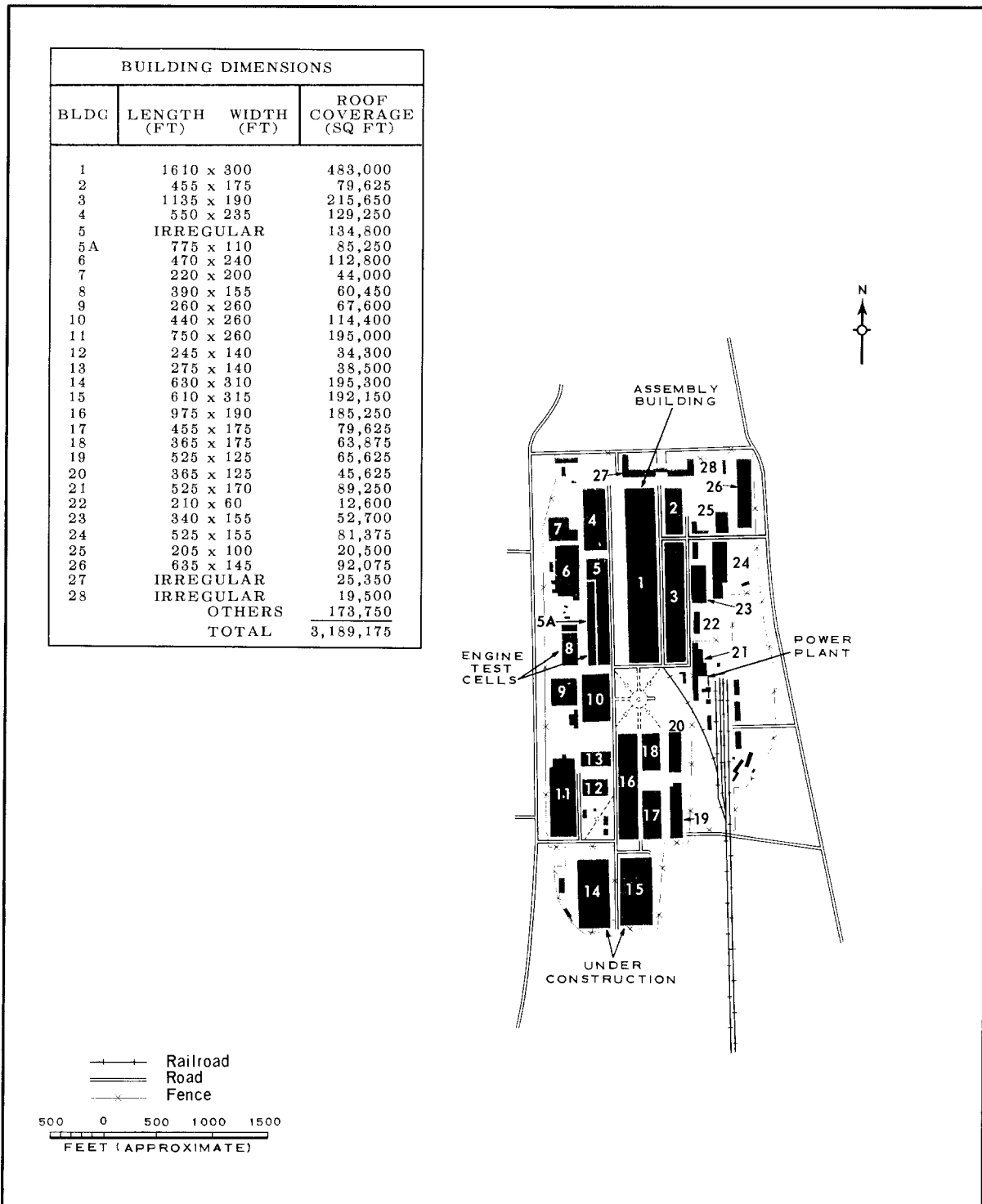
TOP SECRET

25X1

TOP SECRET

25X1

August 1963



NPIC H-5263 (10/63)

FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ENGINE PLANT NO 19 AT PERM.

Perm 2-3

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

**PERM: SUSPECT ROCKET TEST FACILITY****PHOTOGRAPHIC CHRONOLOGY**

This suspect rocket test facility was apparently complete and operational when first observed on photography from [REDACTED]

25X1

[REDACTED] More details, including fuel storage tanks and rail spurs, were observed on the better-quality photography from [REDACTED]

25X1

25X1

[REDACTED] These details were apparently present in 1962 but were not recognized because of the poor quality of the earlier photography. Only one test stand has been observed at this site.

25X1

**EVALUATION**

25X1

Perm 3-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1

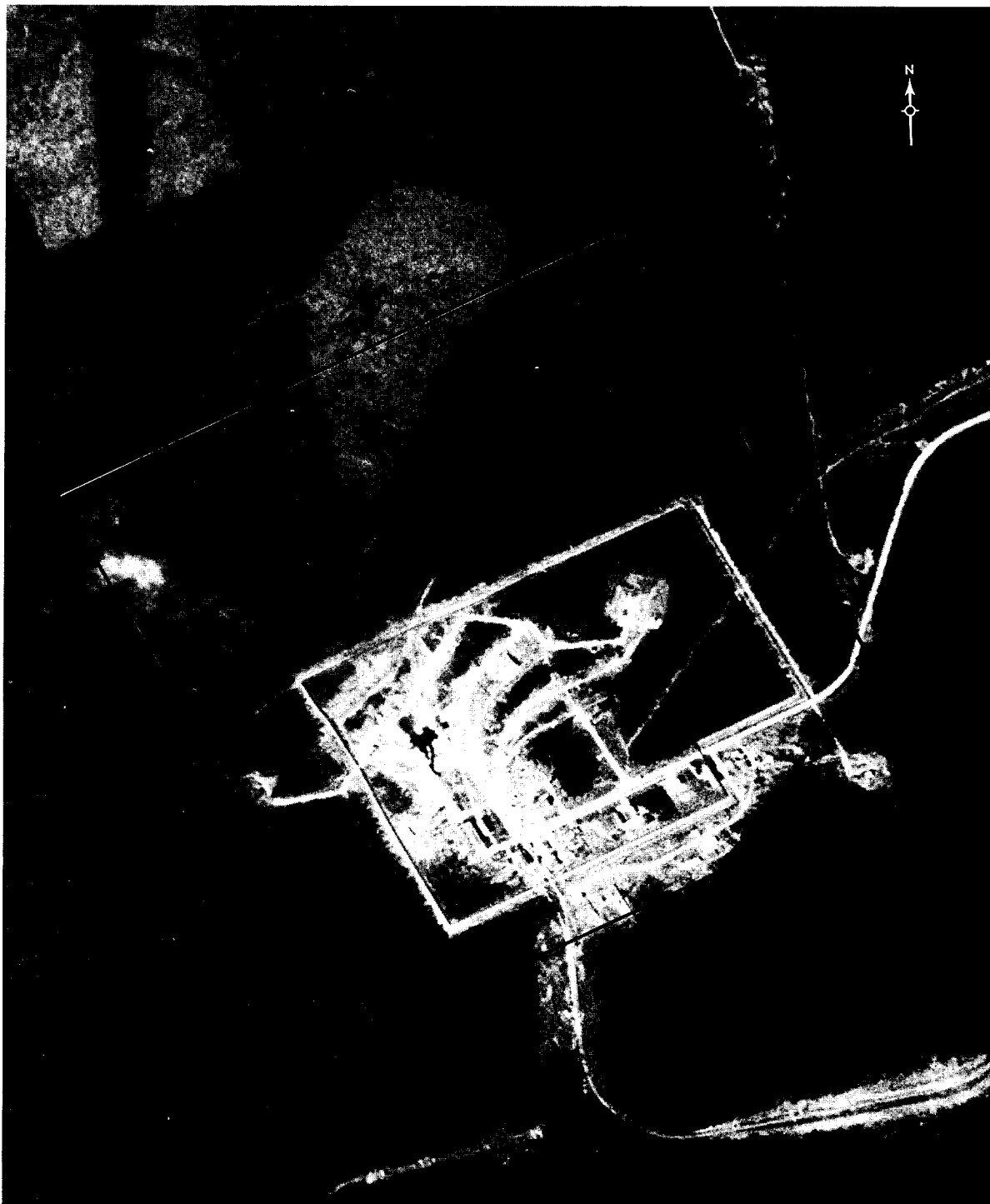


FIGURE 1. USSR: SUSPECT ROCKET TEST FACILITY AT PERM

NPIC H-5264 (10/63)

25X1

Perm 3-2

TOP SECRET

25X1



TOP SECRET

25X1

August 1963

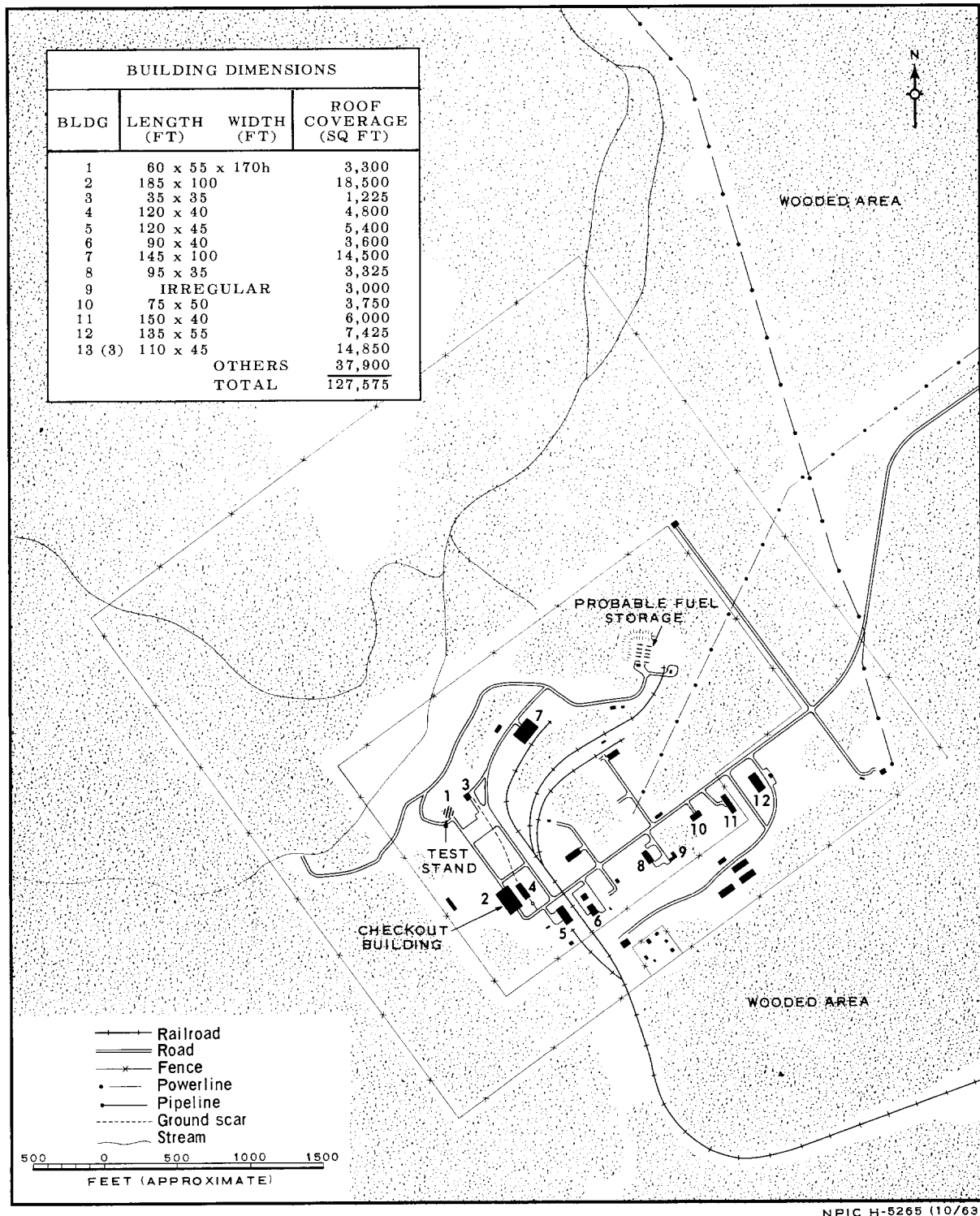


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF SUSPECT ROCKET TEST FACILITY AT PERM.

Perm 3-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

SARATOV

Section

City of Saratov

0

Airframe Plant No 292

1

51-29N 45-57E;

25X1

Saratov 0-1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1

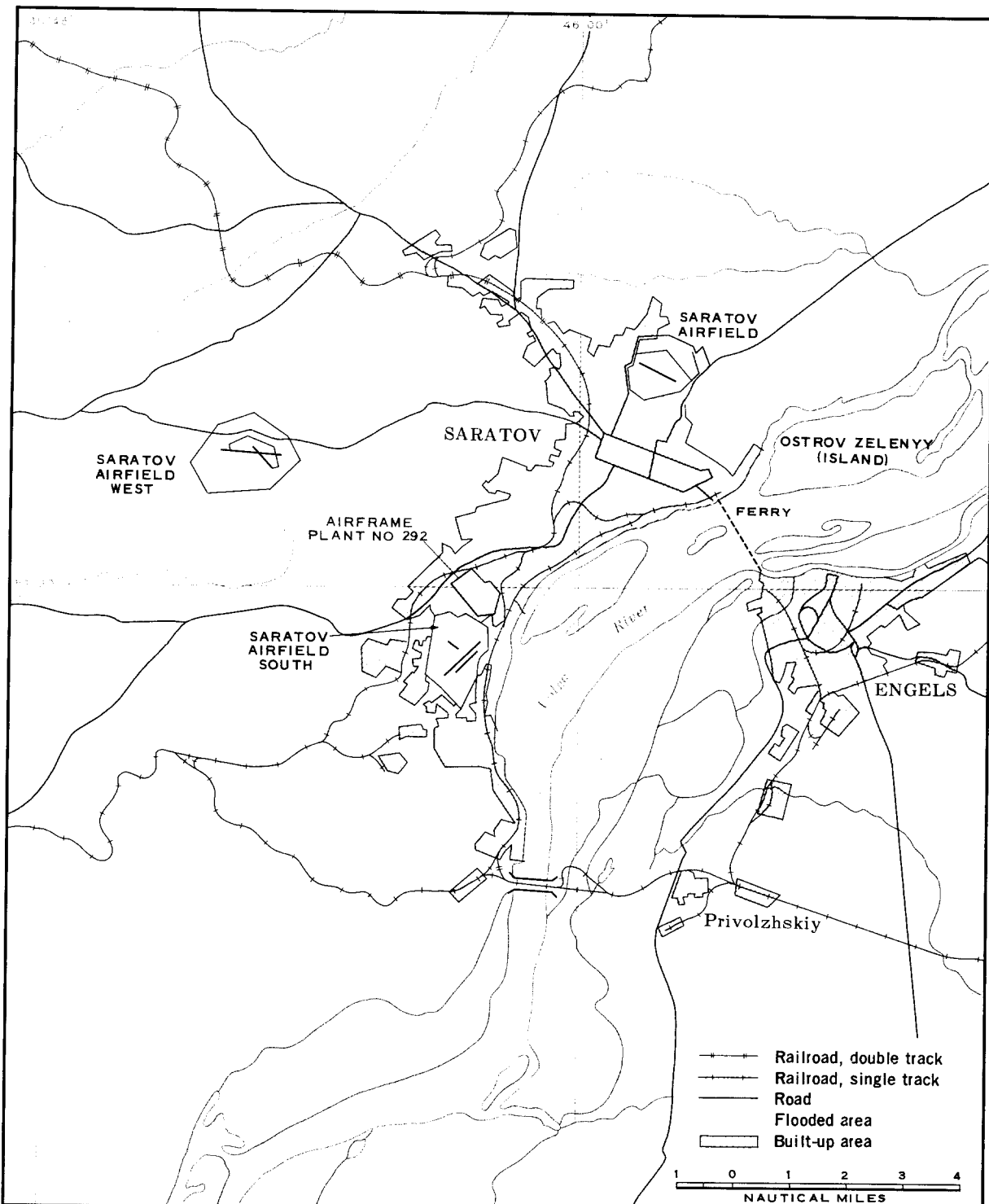


FIGURE 1. USSR: CITY OF SARATOV.

NPIC H-5198 (10/63)

Saratov 0-2

TOP SECRET

25X1

August 1963



FIGURE 2. USSR: CITY OF SARATOV

NPIC H-5199 (10/63)

25X1

Saratov 0-3

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

**SARATOV: AIRFRAME PLANT NO 292****PHOTOGRAPHIC CHRONOLOGY**

This installation was first covered by [REDACTED]

25X1

[REDACTED] At that time a subassembly building (item 1, Figure 2) was in an early stage of construction. Photography from [REDACTED]

25X1

25X1

[REDACTED] revealed that the new subassembly building was in a later stage of construction, and photography from [REDACTED]

25X1

25X1

[REDACTED] revealed that this building had been completed. No other major changes have been noted since 1959.

25X1

**EVALUATION**

This plant has produced the FLASHLIGHT D (YAK-27) aircraft since 1958 and probably the MANDRAKE (a Yakolev high-altitude aircraft) since 1960/61. There is no evidence which indicates that Plant No 292 is involved in the long-range ballistic missile program. The TALENT photography of 1959 indicates that the plant is probably a producer of SA-2 missiles. The quality of the KEYHOLE photography precludes confirmation of continued missile production at Plant No 292 since 1959.

Saratov 1-1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: AIRFRAME PLANT NO 292 AT SARATOV

NRIC H-5200 (10/63)

Saratov 1-2

25X1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

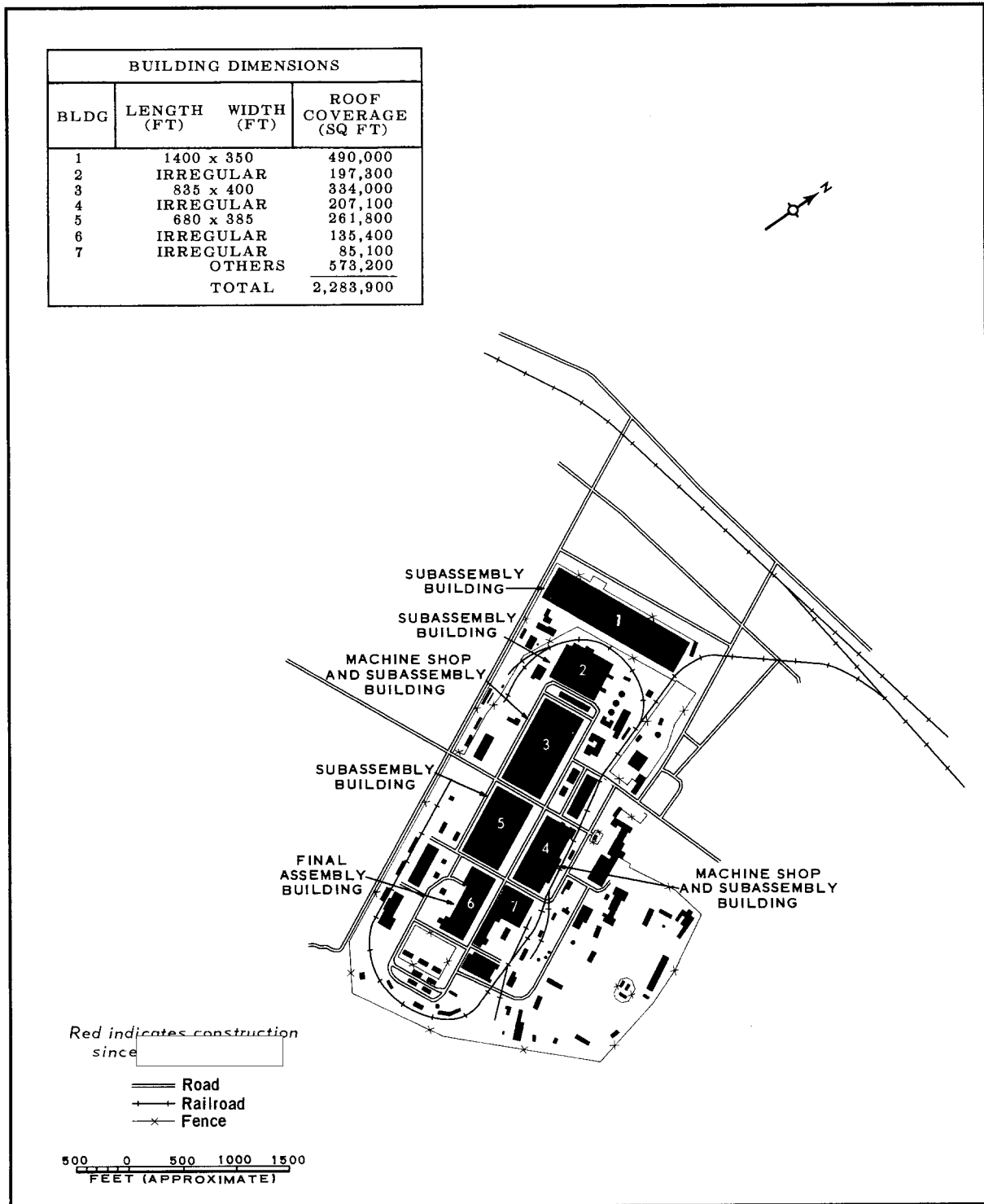


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRFRAME PLANT NO 292 AT SARATOV.

Saratov 1-3

TOP SECRET

25X1

~~TOP SECRET~~

25X1

August 1963

TBILISI

Section

City of Tbilisi

0

Aircraft Assembly Plant No 31

1

41-40N 44-52E;

25X1

Tbilisi 0-1

~~TOP SECRET~~

25X1



TOP SECRET

25X1

August 1963

25X1

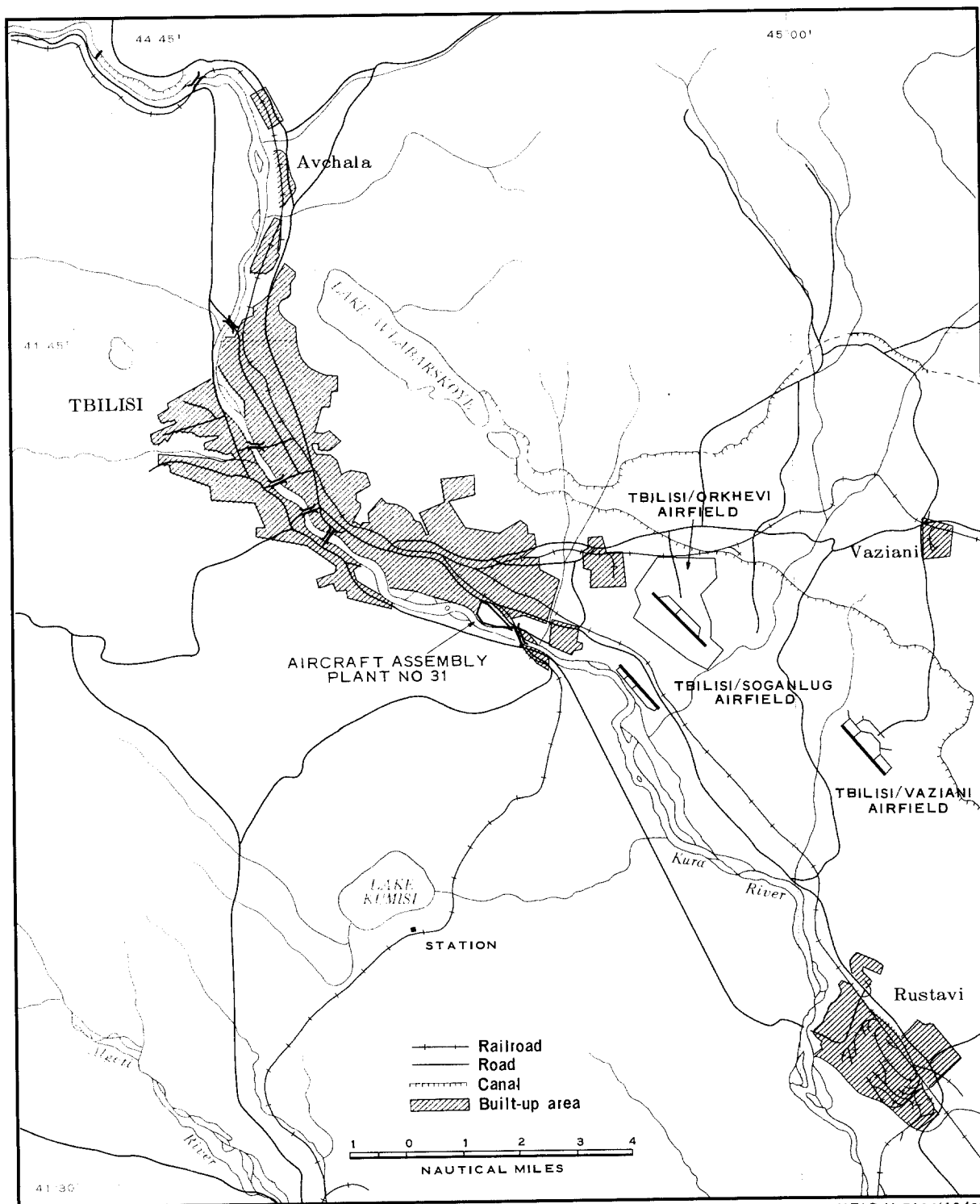


FIGURE 1. USSR: CITY OF TBILISI.

NPIC H-5164(10/63)

Tbilisi 0-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

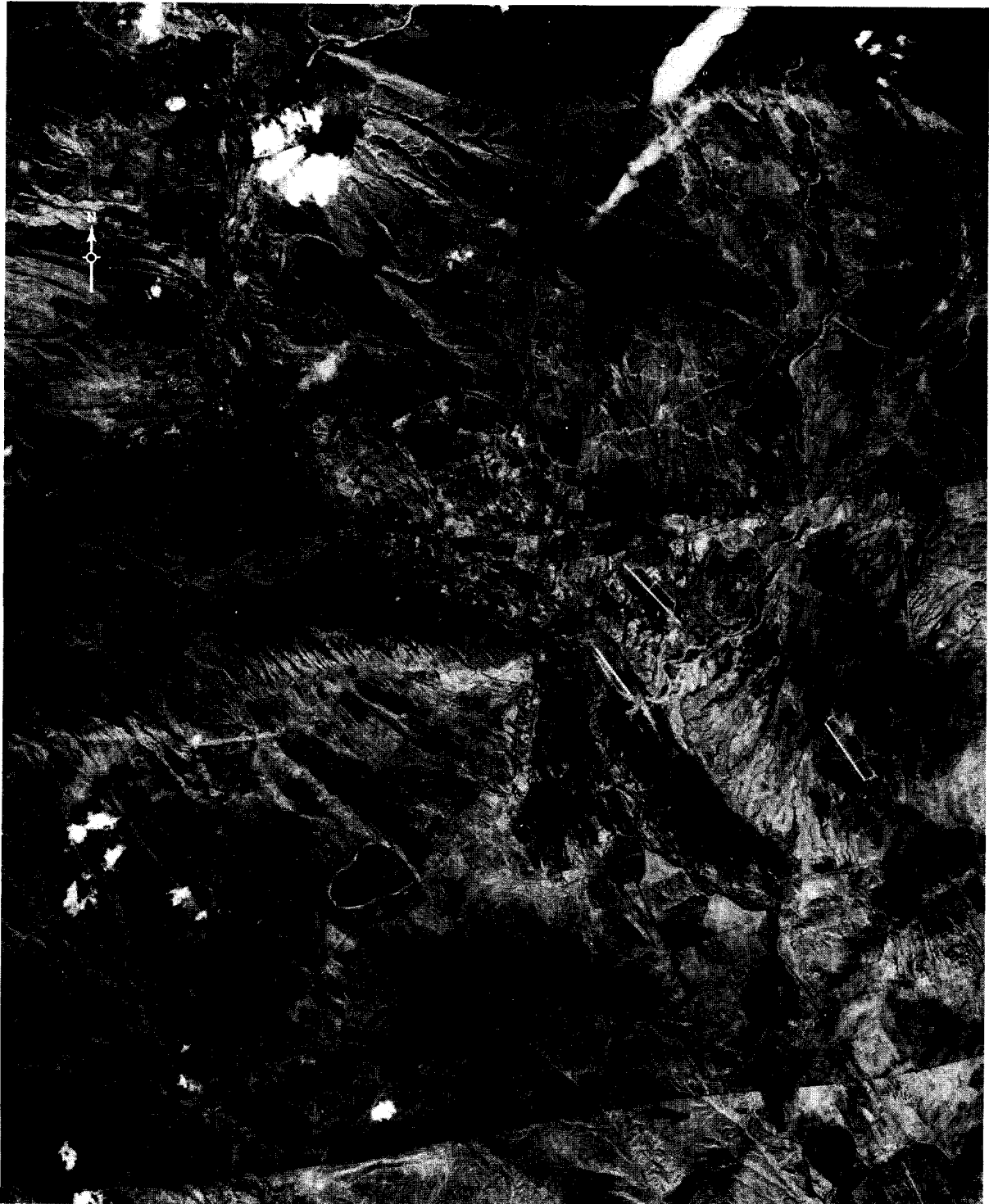


FIGURE 2. USSR: CITY OF TBILISI

NPIC H-5165(10/63)

25X1

Tbilisi 0-3

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

**TBILISI: AIRCRAFT ASSEMBLY PLANT NO 31****PHOTOGRAPHIC CHRONOLOGY**

Photography from [ ] confirmed the general layout of the plant obtained from the high-quality TALENT photography of 1957. Photography from [ ] revealed the construction of a large L-shaped building southeast of the two fabrication buildings.

25X1

25X1

**EVALUATION**

The Tbilisi Aircraft Assembly Plant No 31 is believed to be engaged in production of the TRUCKLE/KIPPER (K-10) and possibly the CHERUB/KANGAROO air-to-surface missiles (ASM). The plant produces FISHBED (MIG-21) fighter aircraft and recently has been identified as producing a new MIG trainer. There is no indication that the plant is involved in production of ballistic missiles.

Photography of this facility neither confirms nor negates missile activity.

Tbilisi 1-1

**TOP SECRET**

25X1

TOP SECRET

25X1

25X1

August 1963



FIGURE 1. USSR: AIRCRAFT ASSEMBLY PLANT NO 31 AT TBILISI

25X1

Tbilisi 1-2

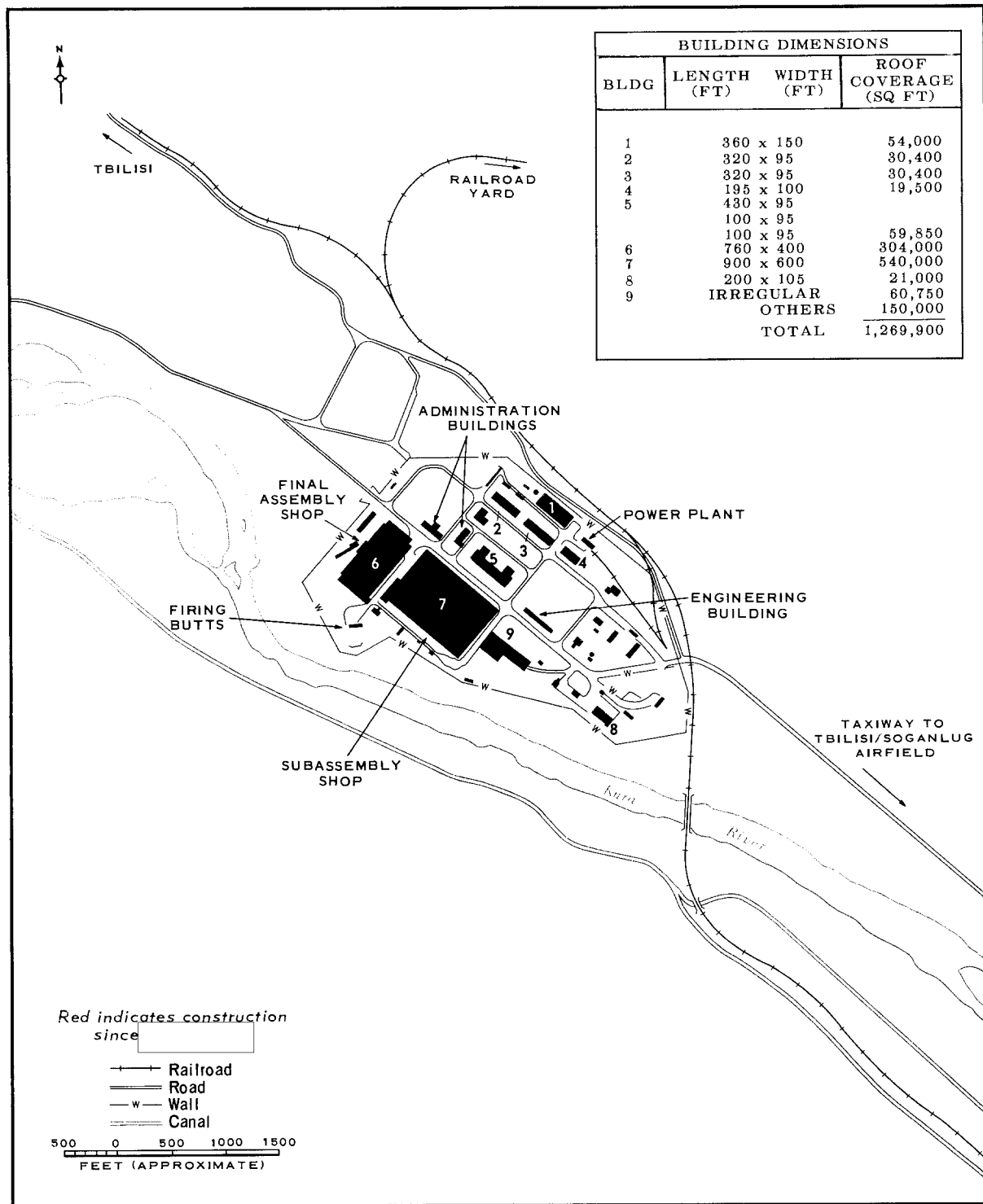
TOP SECRET

25X1

TOP SECRET

25X1

August 1963



NPIC H-5167(10/63)  
 FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ASSEMBLY PLANT NO 31 AT TBILISI.

Tbilisi 1-3

TOP SECRET

25X1

~~TOP SECRET~~

25X1

August 1963

UFA

Section

City of Ufa

0

Aircraft Engine Plants No 26A and No 26B

1

(No 26A) 54-47N 56-07E;

(No 26B) 54-47N 56-04E;

25X1

Suspect Test Facility

2

54-59N 56-04E;

25X1

Ufa 0-1

~~TOP SECRET~~

25X1



August 1963



FIGURE 2. USSR: CITY OF UFA

NRIC H-5152 (10/63)

25X1

Ufa 0-3

TOP SECRET

25X1



**TOP SECRET**

25X1

August 1963

**UFA: AIRCRAFT ENGINE PLANTS NO 26A AND NO 26B****PHOTOGRAPHIC CHRONOLOGY**

There was no readable KEYHOLE or TALENT photography of Ufa before 1962. The basic knowledge of both plants is provided by German photography of 1942. These plants were covered by three KEYHOLE missions in 1962; the best photography was provided by [REDACTED]

25X1

[REDACTED] Since 1942 there has been an increase at Plant No 26A of over 350,000 square feet of roof coverage. Most of this increase is accounted for in Building 2, a large subassembly and final assembly building. At Plant No 26B there has been an increase of 570,000 square feet of roof coverage, including a new building for jet engine testing and an expansion of assembly area. No rocket engine test facilities are observable in the plant areas.

25X1

**EVALUATION**

There is evidence indicating that Aircraft Engine Plant No 26 (either the A or B area) is producing jet engines for the air-to-surface missile program. There is no evidence, photographic or otherwise, indicating that the plant produces rocket engines for ballistic missiles.

Ufa 1-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1



NPIC H-5153 (10/63)

FIGURE 1. USSR: AIRCRAFT ENGINE PLANT NO 26A AT UFA

25X1

Ufa 1-2

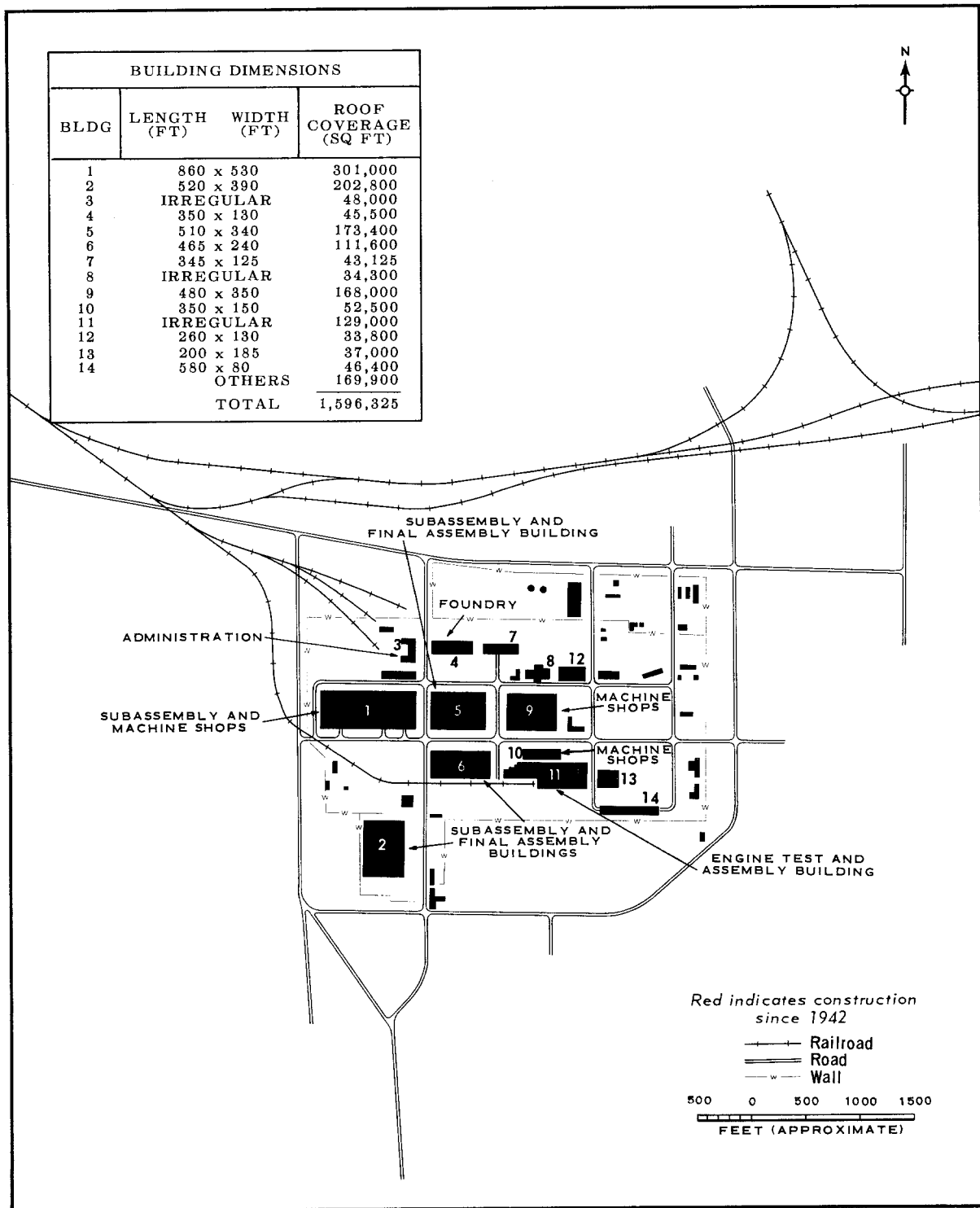
TOP SECRET

25X1

TOP SECRET

25X1

August 1963



NPIC H-5154 (10/63)

FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ENGINE PLANT NO 26A AT UFA.

Ufa 1-3

TOP SECRET

25X1

TOP SECRET

25X1

25X1

August 1963



NPIC H-5155 (10/63)

FIGURE 3. USSR: AIRCRAFT ENGINE PLANT NO 26B AT UFA

Ufa 1-4

TOP SECRET

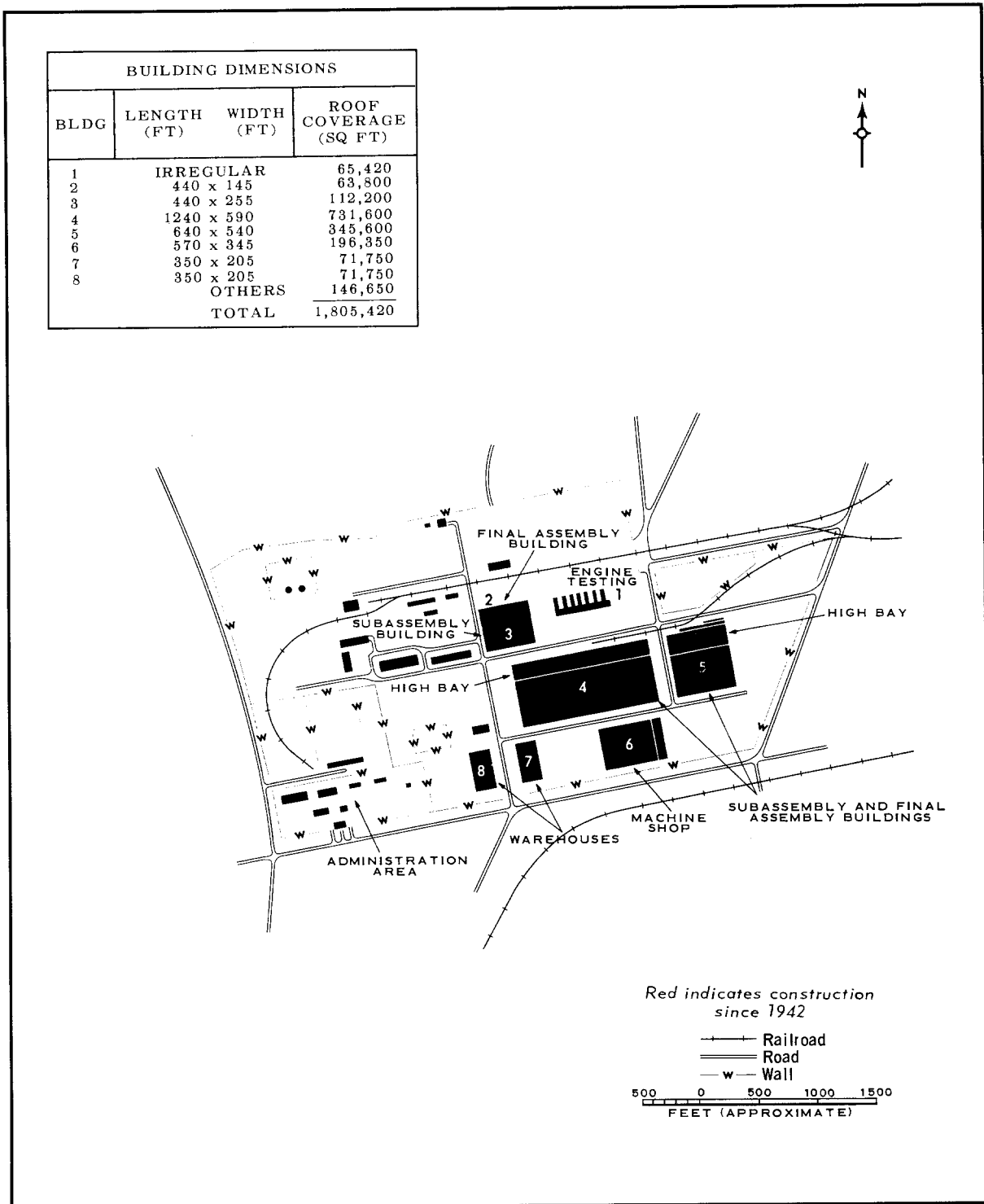
25X1

25X1

TOP SECRET

25X1

August 1963



NPIC H-5156 (10/63)

FIGURE 4. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ENGINE PLANT NO 26B AT UFA.

Ufa 1-5

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

**UFA: SUSPECT TEST FACILITY****PHOTOGRAPHIC CHRONOLOGY**

The Suspect Test Facility was covered by three KEYHOLE missions in 1962; the best photography was provided by [REDACTED]

25X1

[REDACTED] The photography reveals that some minor changes had been made during 1962 (since the initial coverage of [REDACTED] in the road and rail network serving the area and by the construction of several small buildings. Photography from [REDACTED] indicates no other changes in the area.

25X1

25X1

25X1

**EVALUATION**

25X1

Ufa 2-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: SUSPECT TEST FACILITY NEAR UFA

10/63)

Ufa 2-2

25X1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

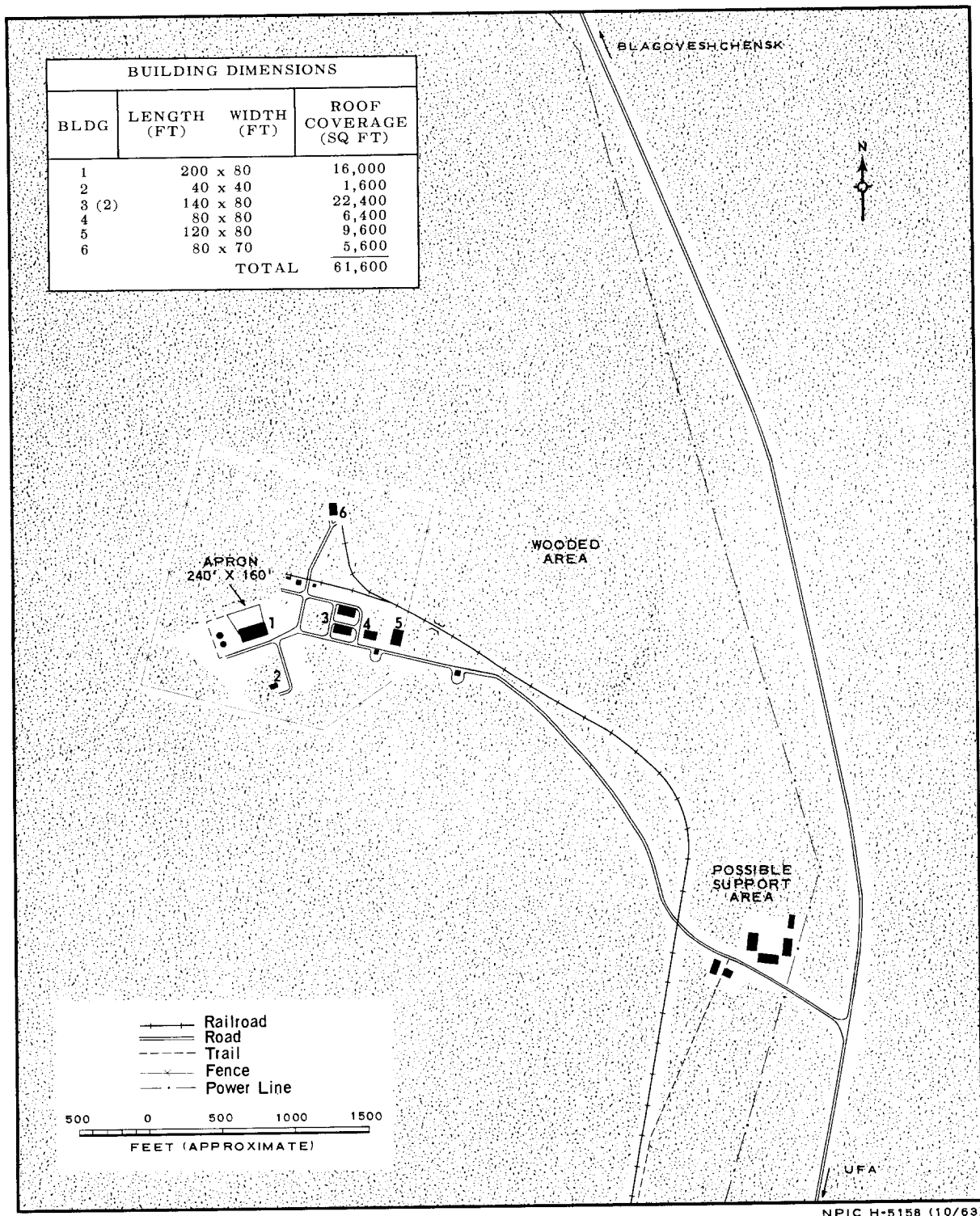


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF SUSPECT TEST FACILITY NEAR UFA.

Ufa 2-3

TOP SECRET

25X1



~~TOP SECRET~~

25X1

August 1963

VORONEZH

Section

City of Voronezh

0

Suspect Rocket Test Facility

1

51-34N 39-08E;

25X1

Voronezh 0-1

~~TOP SECRET~~

25X1

TOP SECRET

25X1

August 1963

25X1

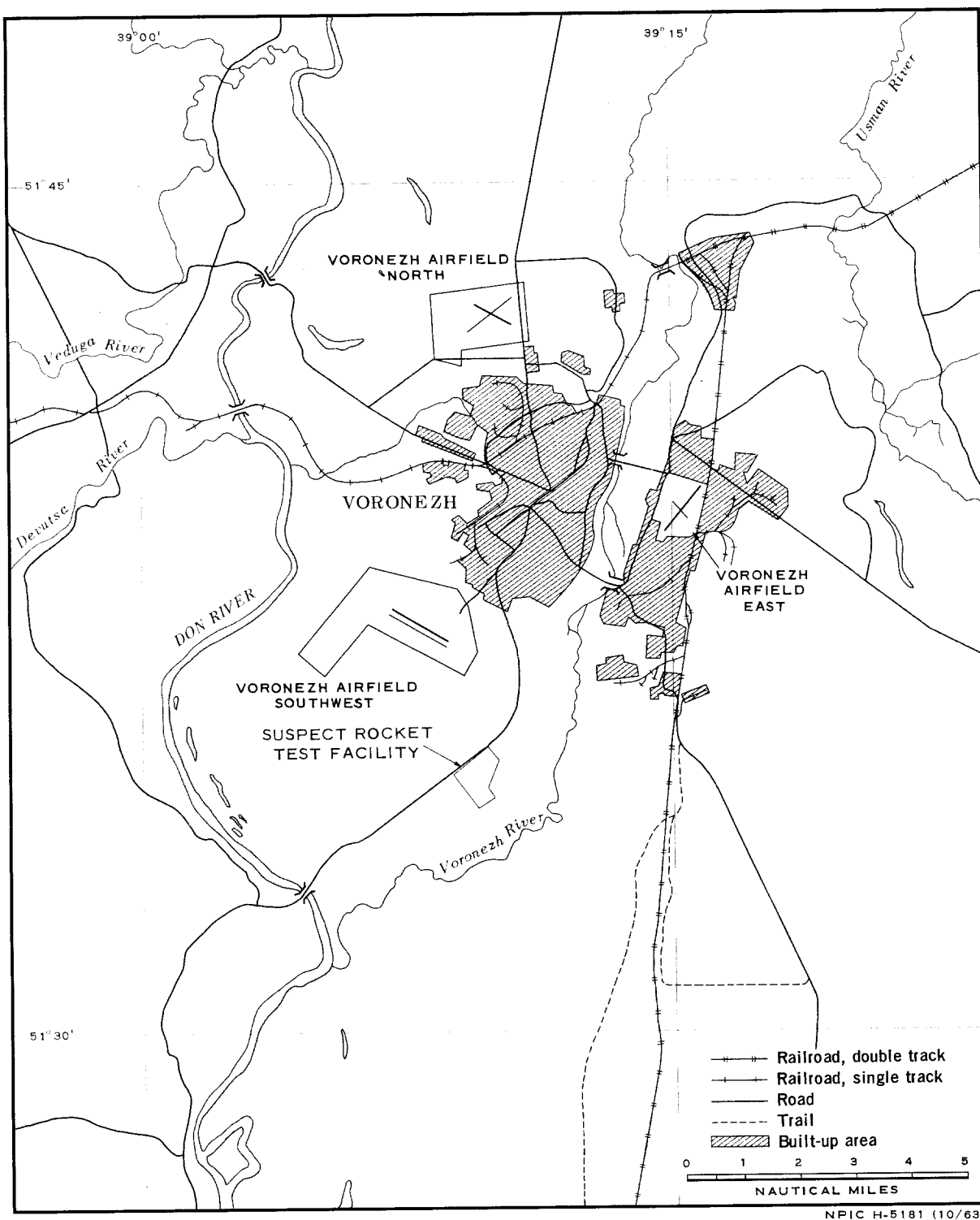


FIGURE 1. USSR: CITY OF VORONEZH.

Voronezh 0-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963



FIGURE 2. USSR: CITY OF VORONEZH

H-5182 (10/63)

25X1

Voronezh 0-3

TOP SECRET

25X1

August 1963

## **VORONEZH: SUSPECT ROCKET TEST FACILITY**

### **PHOTOGRAPHIC CHRONOLOGY**

This installation was first observed on photography from TALENT [redacted] At that time it consisted of a fenced area containing one large building with two probable firing bays and six smaller miscellaneous buildings. Construction activity was evident immediately outside the fenced area. KEYHOLE photography from [redacted] revealed a considerable enlargement of the facility and additional construction activity. Subsequent KEYHOLE photography reveals continuing expansion and new construction, but the quality of the photography precludes a detailed interpretation of the changes.

25X1

25X1

### **EVALUATION**

[redacted]  
of the photography precludes determination of the purpose or the operational status of newer portions of this facility (the portion seen initially appeared to be operational in 1960), and there is no photographic evidence to associate the facility with any other in Voronezh.

25X1

Voronezh 1-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1



NPIC H-5183 (10/63)

FIGURE 1 USSR: SUSPECT ROCKET TEST FACILITY AT VORONEZH

Voronezh 1-2

25X1

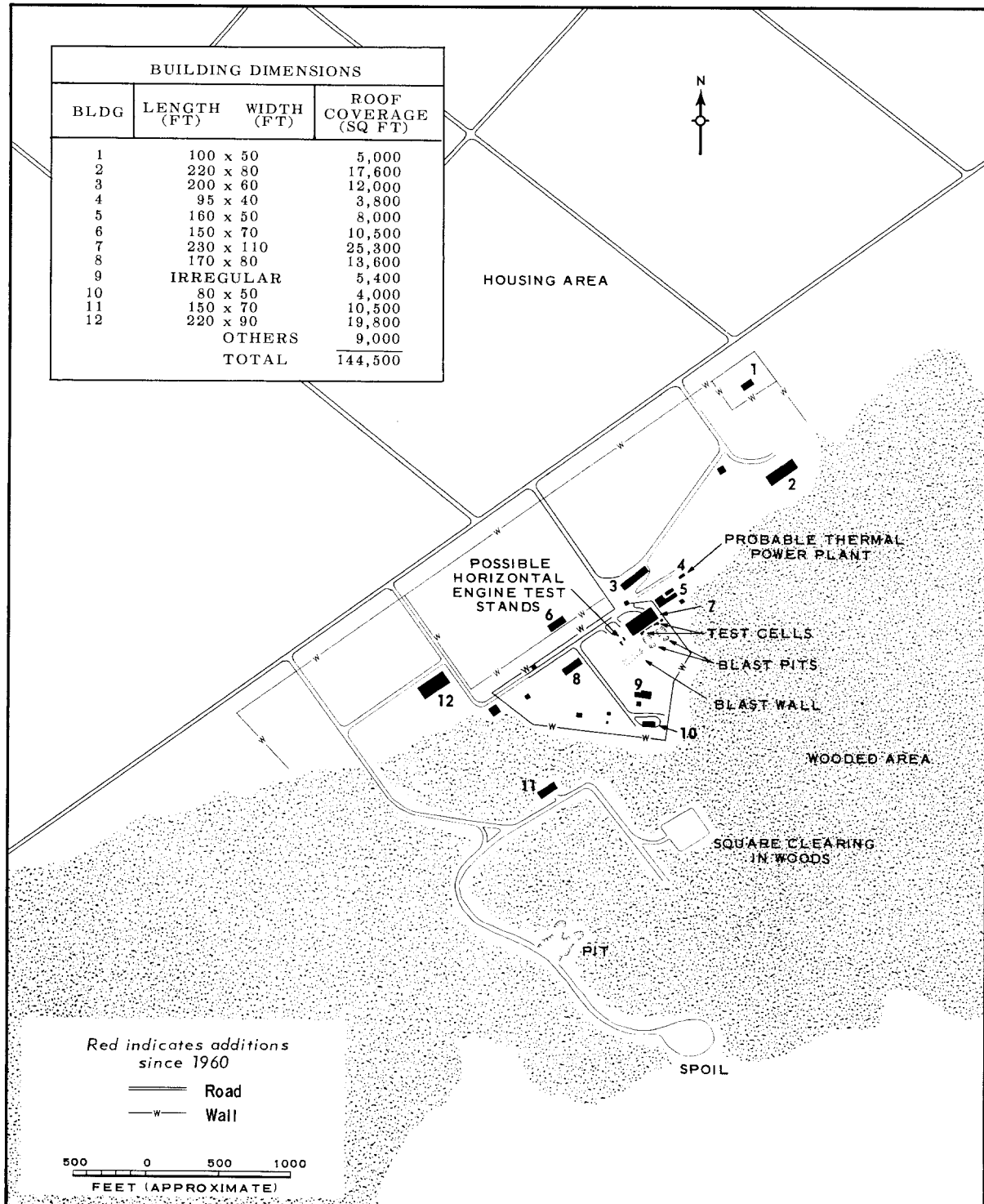
TOP SECRET

25X1

TOP SECRET

25X1

August 1963



NPIC H-5184 (10/63)

FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF SUSPECT ROCKET TEST FACILITY AT VORONEZH.

Voronezh 1-3

TOP SECRET

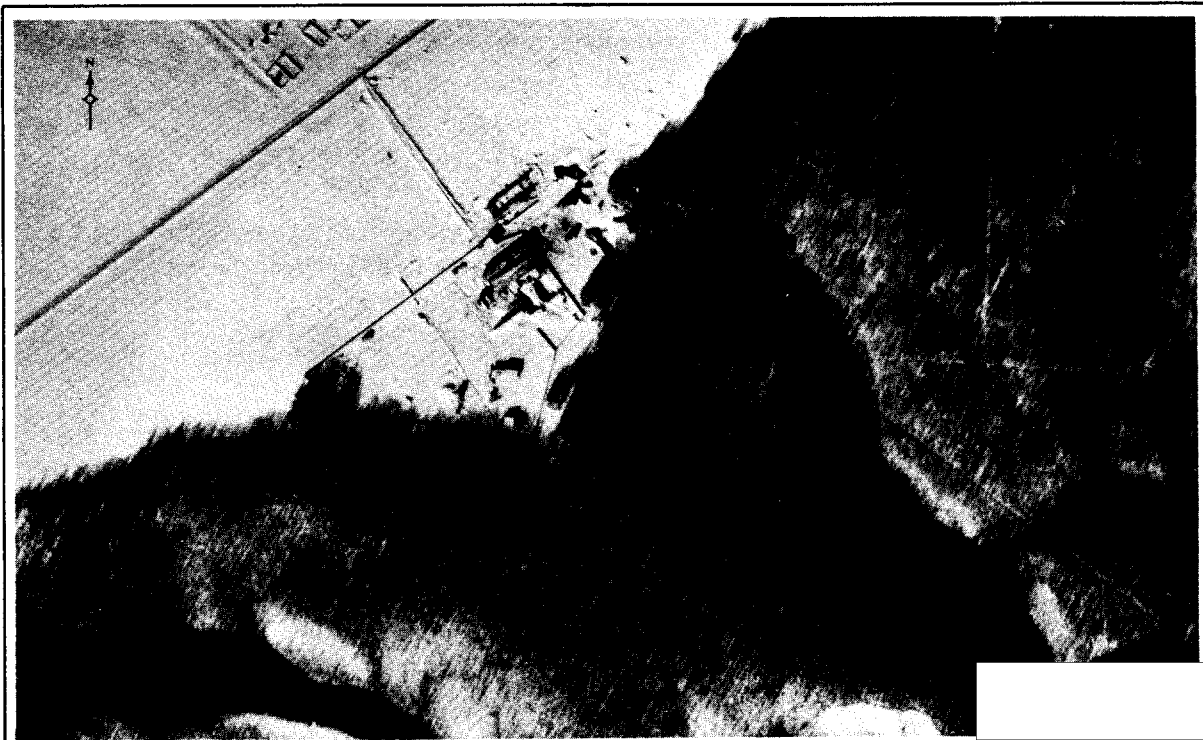
25X1

TOP SECRET

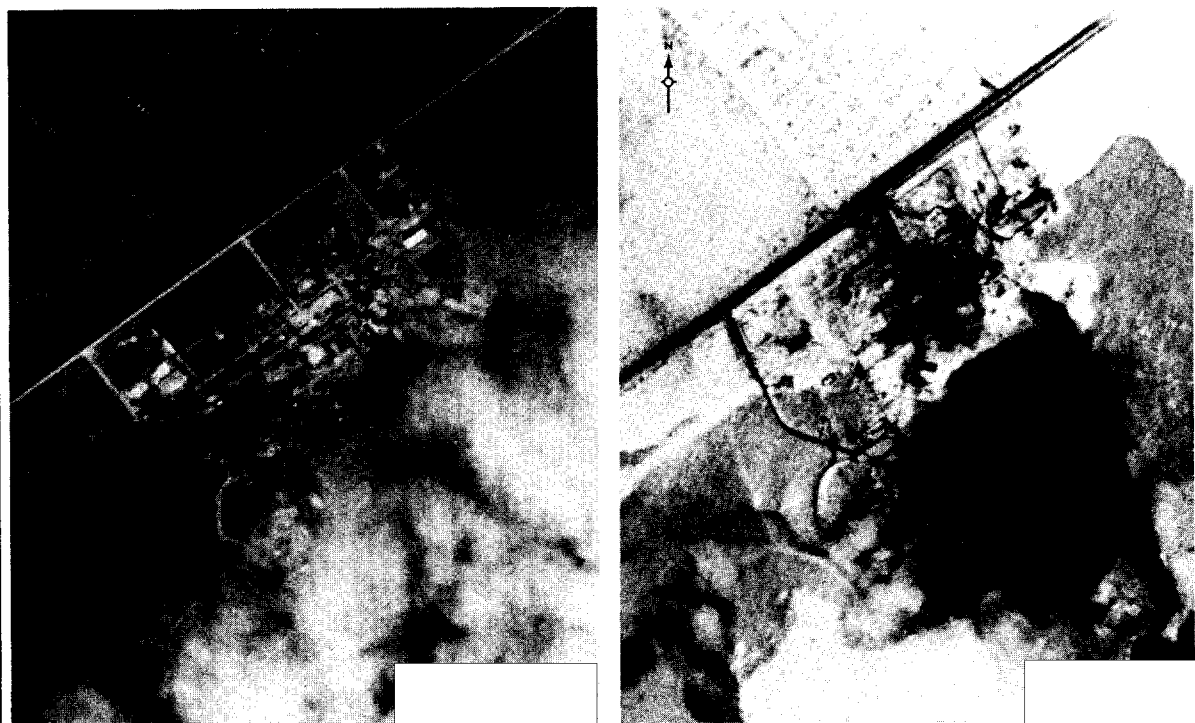
25X1

August 1963

25X1



25X1



25X1

NPIC H-5185 (10/63)  
FIGURE 3. USSR: COMPARATIVE PHOTOGRAPHY OF SUSPECT ROCKET TEST FACILITY AT VORONEZH.

Voronezh 1-4

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

ZAPOROZHYE

Section

City of Zaporozhye

0

Aircraft Engine Plant No 478

1

47-49N 35-11E;

25X1

Zaporozhye 0-1

TOP SECRET

25X1



TOP SECRET

25X1

August 1963

25X1

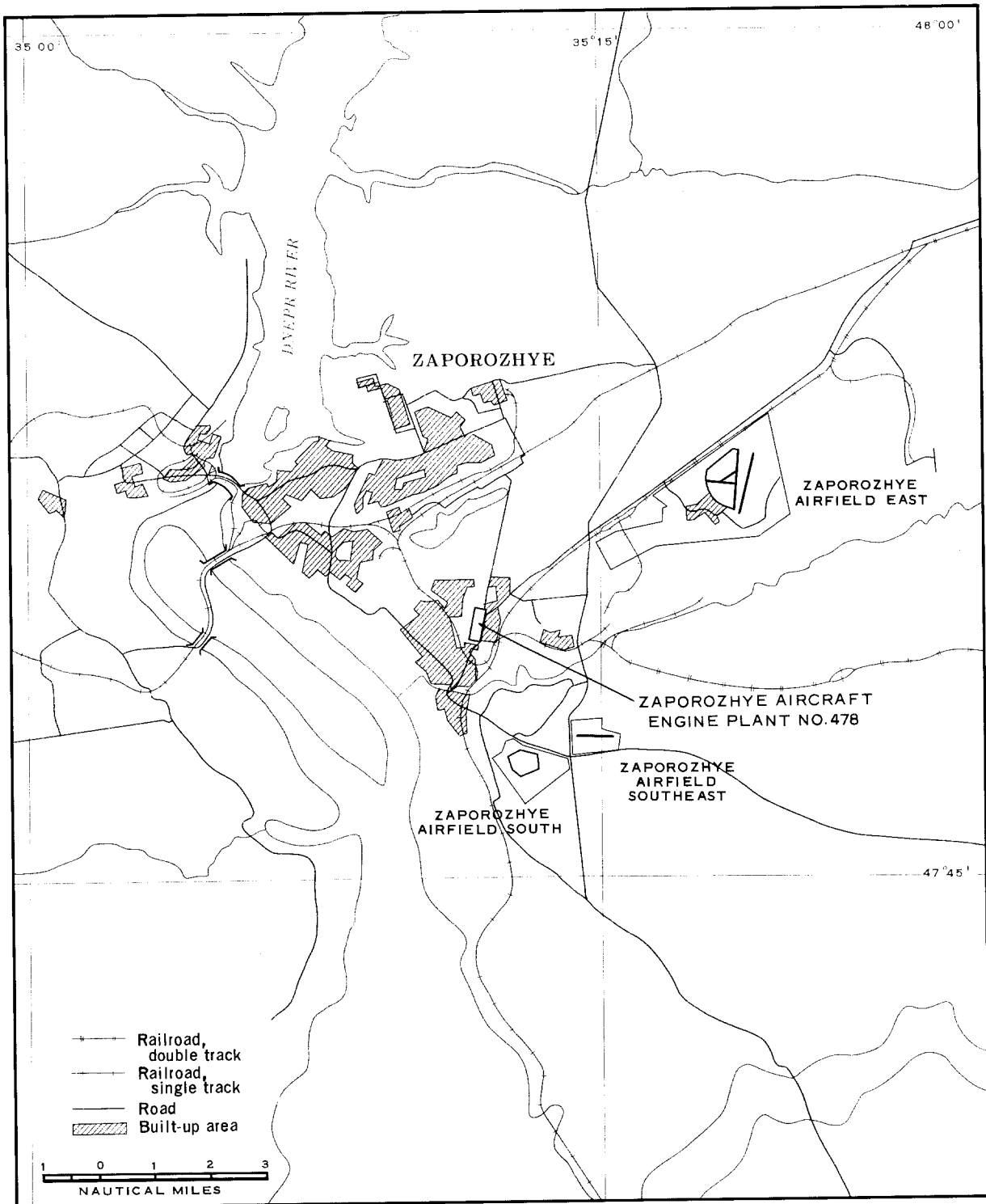


FIGURE 1. USSR: CITY OF ZAPOROZHYE.

NPIC H-5041 (10/63)

Zaporozhye 0-2

TOP SECRET

25X1

TOP SECRET

25X1

August 1963



FIGURE 2. USSR: CITY OF ZAPOROZHIE

H-5042 (10/63)

25X1

Zaporozhye 0-3

TOP SECRET

25X1

**TOP SECRET**

25X1

August 1963

**ZAPOROZHYE: AIRCRAFT ENGINE PLANT NO 478****PHOTOGRAPHIC CHRONOLOGY**

Aircraft Engine Plant No 478 was first observed on TALENT photography of [redacted] Good-quality KEYHOLE photography was last obtained from [redacted] A large fabrication and assembly-type building (item 1, Figure 4), covering 204,350 square feet and which was under construction in 1960, was completed by [redacted] [redacted] Additions to two smaller buildings were also completed. No rocket engine test facilities have been identified at this plant or in the surrounding area.

25X1  
25X125X1  
25X1**EVALUATION**

In view of the reported statement by officials of Plant No 478 that the plant had been involved in production of components for the Soviet Sputnik, it is possible that some missile and space vehicle components are produced here. However, the plant produces engines for transport aircraft, and this activity probably is its major concern. While photographic evidence indicates additional plant capacity after 1960, there is no direct evidence, photographic or otherwise, indicating involvement in the ICBM program or other programs for production of ballistic missiles.

Zaporozhye 1-1

**TOP SECRET**

25X1

TOP SECRET

25X1

August 1963

25X1



FIGURE 1. USSR: AIRCRAFT ENGINE PLANT NO 478 AT ZAPOROZHYE

NRIC H-5043 (10/63)

Zaporozhye 1-2

25X1

25X1

TOP SECRET

25X1

TOP SECRET

25X1

August 1963

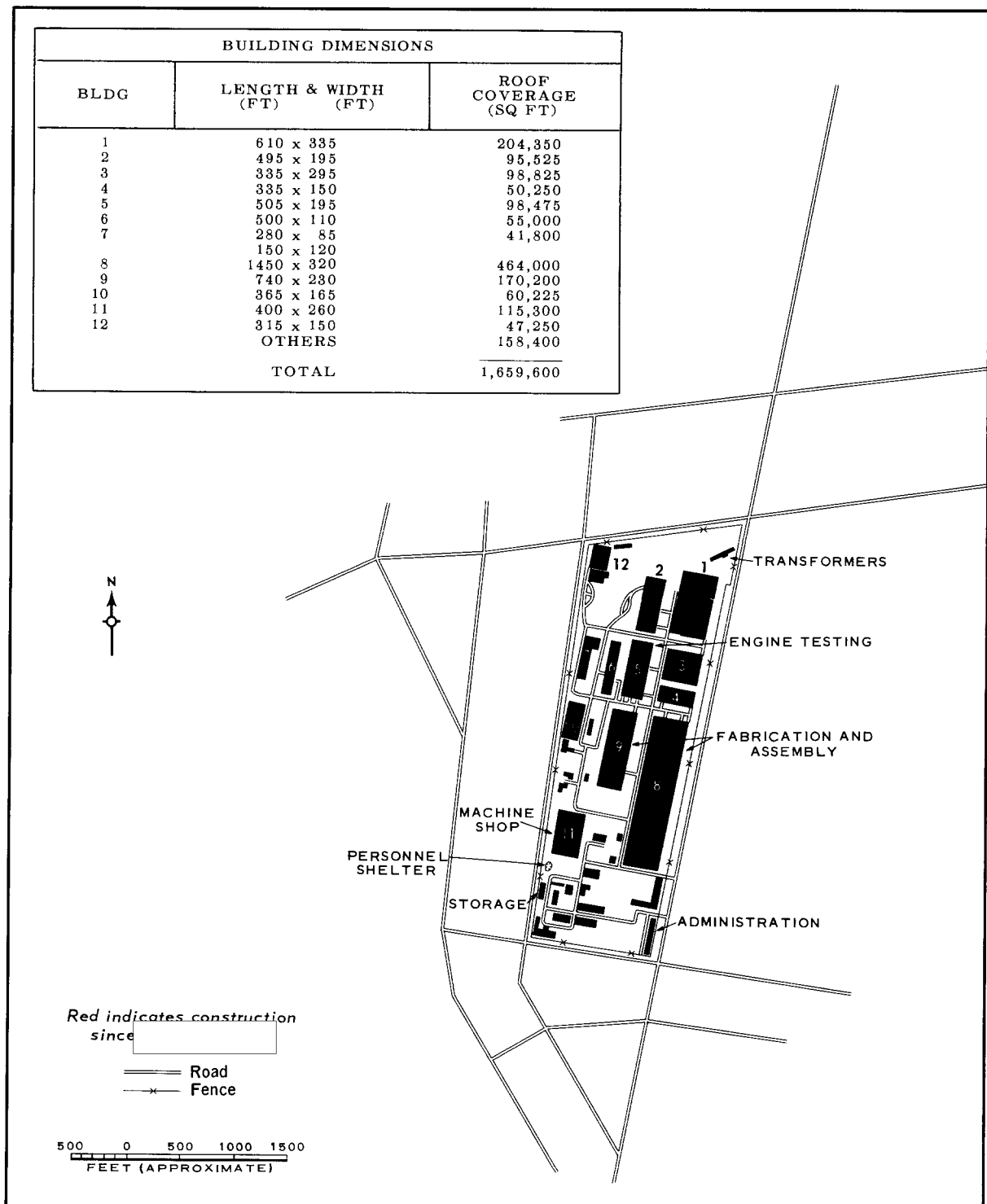


FIGURE 2. USSR: LAYOUT AND ROOF COVERAGE OF AIRCRAFT ENGINE PLANT NO 478 AT ZAPOROZHYE.

NPIC H-5044 (10/63)

Zaporozhye 1-3

TOP SECRET

25X1

*TOP SECRET*

*TOP SECRET*